

Major Applied
Research 3
Working Paper 1

**Equity of Health
Sector Revenue
Generation and
Allocation in
Guatemala**

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Partnerships
for Health
Reform



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Partnerships
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Mission

The Partnerships for Health Reform (PHR) Project seeks to improve people's health in low- and middle-income countries by supporting health sector reforms that ensure equitable access to efficient, sustainable, quality health care services. In partnership with local stakeholders, PHR promotes an integrated approach to health reform and builds capacity in the following key areas:

- ▲ *better informed and more participatory policy processes in health sector reform;*
- ▲ *more equitable and sustainable health financing systems;*
- ▲ *improved incentives within health systems to encourage agents to use and deliver efficient and quality health service; and*
- ▲ *enhanced organization and management of health care systems and institutions to support specific health sector reforms.*

PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.

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Abstract

This paper presents methods and results from the Partnerships for Health Reform Project's empirical work on equity carried out in four departments of Guatemala, using government-supplied data as well as household survey information on health care spending. It is part of a larger study that will provide more in-depth analysis. Section 2 of the paper presents an overview of the health sector in Guatemala; Section 3 provides basic information on government health care financing in that country; Section 4 describes the household survey used in the analysis; Section 5 presents the results; and Section 6 offers policy conclusions. This analysis found significant inequity in health care delivery in the departments studied, particularly for curative health care delivery, and recommends increased public health spending either through direct investment in government health facilities or through income subsidies for the poor.

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Acronyms

| | |
|--------------|--|
| ENGAS | Household Health Care Demand and Expenditure Survey |
| GNP | Gross National Product |
| IGSS | Guatemalan Social Security Institute (<i>Instituto Guatemalteco para la Seguridad Social</i>) |
| MSPAS | Ministry of Public Health and Social Assistance (<i>Ministerio de Salud Pública y Asistencia Social</i>) |
| NGO | Non-governmental Organization |
| PHR | Partnerships for Health Reform Project |
| USAID | United States Agency for International Development |

Foreword

Part of the mission of the Partnerships in Health Reform Project (PHR) is to advance “knowledge and methodologies to develop, implement, and monitor health reforms and their impact.” This goal is addressed not only through PHR’s technical assistance work but also through its Applied Research program, designed to complement and support technical assistance activities. The program comprises Major Applied Research studies and Small Applied Research grants.

The Major Applied Research topics that PHR is pursuing are those in which there is substantial interest on the part of policymakers, but only limited hard empirical evidence to guide policymakers and policy implementors. Currently researchers are investigating six main areas:

- ▲ Analysis of the process of health financing reform
- ▲ The impact of alternative provider payment systems
- ▲ Expanded coverage of priority services through the private sector
- ▲ Equity of health sector revenue generation and allocation patterns
- ▲ Impact of health sector reform on public sector health worker motivation
- ▲ Decentralization: local level priority setting and allocation

Each Major Applied Research Area yields working papers and technical papers. Working papers reflect the first phase of the research process. The papers are varied; they include literature reviews, conceptual papers, single country-case studies, and document reviews. None of the papers is a polished final product; rather, they are intended to further the research process—shedding further light on what seemed to be a promising avenue for research or exploring the literature around a particular issue. While they are written primarily to help guide the research team, they are also likely to be of interest to other researchers, or policymakers interested in particular issues or countries.

Ultimately, the working papers will contribute to more final and thorough pieces of research work, such as multi-country studies and reports presenting methodological developments or policy relevant conclusions. These more polished pieces will be published as technical papers.

All reports will be disseminated by the PHR Resource Center and via the PHR website.

Sara Bennett, Ph.D.
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Partnerships for Health Reform

01. Introduction

Equitable access to a minimum set of personal health services is a major stated objective of many countries' health policies.¹ Actions are taken or, in some cases, policy options are set aside, in pursuit of this objective.

A recent World Health Organization publication seeks to put new emphasis on equity in health care.² Among other things, it calls for research into equity promoting policies and cross-national exchanges and comparisons.

The Partnerships for Health Reform (PHR) Project has set out to study equity in health care delivery and financing in developing countries, to contribute to the nascent but growing body of empirical knowledge in this area. The concept paper for this study defines the goals and objectives of PHR's work in this area, and proposes that research be carried out in several developing countries around the world.

Specific research questions that PHR wishes to address through its work include the following:

- ▲ What is the incidence, or distributional effect, of the combination of revenue generation methods used for personal health services (incidence of financing)?³
- ▲ What is the incidence of spending allocations for personal health services (incidence of delivery)?
- ▲ What is the distribution of health status that results from the incidences of financing and delivery for personal health services?
- ▲ What do cross-country comparisons of results tell us about policies taken or foregone in the pursuit of equity?
- ▲ How well do government's attempts to use policies to achieve equity objectives meet those objectives?

PHR's equity research work comprises two phases. Phase I, which draws on the study of central government health expenditure information and household survey data, is an initial examination of equity in financing and delivery. Phase II uses further information and more specialized diagnostic tools to provide a more in-depth analysis of equity in financing and delivery. The current paper contains the output of Phase I work. It presents methods and results

¹ Personal, as opposed to public or collective, health services are at issue here. Health services with public good characteristics, such as a safe water supply and epidemiological surveillance, are collectively consumed and almost always collectively financed through government general revenues. The equity of this financing is not in dispute. However, the equity of financing methods and allocations of resources for personal services, such as treatments for illness or injury and individual protection through preventive screenings or immunizations, is controversial. The equity of financing and allocations for personal health services is the target of the proposed research.

² World Health Organization (1996).

³ Impact on socioeconomic status groups.

from the project's empirical work on equity carried out in four departments of Guatemala, using government-supplied data on health spending and household-level information from a recent survey on health care consumption and spending.

The paper is organized as follows. Section 2 presents an overview of the health sector in Guatemala. Section 3 provides basic information about government health care financing in the country. Section 4 describes the household survey that produced the data set used in the analysis of equity. Section 5 presents the results from that analysis. Finally, Section 6 offers a brief summary and policy conclusions.

02. Health Sector Overview

2.1 Health and Demography

Guatemala is a middle income Central American country with a population of approximately 10.6 million people in mid-1995 (see Table 2.1). Compared to countries with similar per capita gross national product (GNP) (in 1995 Guatemala's was US\$ 1,340), Guatemala's fertility rate of 4.7 children per women is considered to be high, leading to a population growth rate of 2.9 percent between 1990 and 1995.

Child immunization coverage is relatively low compared to other Latin American countries. In 1990-91 only 63 percent of the children received the third dose of DPT and less than half were immunized against measles. The prevalence of infectious diseases is high, as well as those diseases caused by poor nutritional habits. (Almost 64 percent of all causes of death in 1995 were due to infectious, nutritional, and perinatal health problems.) Most of these deaths could be prevented at a relatively low cost with improved sanitation, immunizations, and other basic health services.

**Table 2.1 Economic, Demographic and Health Indicators
for Guatemala and Other Latin American Countries***

| Selected Indicators | Bolivia | Guatemala | Ecuador | El Salvador |
|---|---------|--------------|---------|-------------|
| Demographic Indicators | | | | |
| Population in mid-1995 (millions) | 7.4 | 10.6 | 11.5 | 5.6 |
| Population growth rate (%) 1980-90 | 2.0 | 2.8 | 2.5 | 1.0 |
| Population growth rate (%) 1990-95 | 2.4 | 2.9 | 2.2 | 2.2 |
| Fertility rate (children per woman) 1980 | 5.5 | 6.2 | 5.0 | 5.3 |
| Fertility rate (children per woman) 1995 | 4.5 | 4.7 | 3.2 | 3.7 |
| Health Indicators | | | | |
| Life expectancy at birth (years), 1995 | 60 | 66 | 69 | 67.66 |
| Infant mortality rate (per 1,000 live births) 1980 | 118 | 75 | 67 | 81 |
| Infant mortality rate (per 1,000 live births) 1995 | 69 | 44 | 36 | 36 |
| Years of life lost per 1,000 population, 1990 | 59 | 41 | 21 | 28 |
| Prevalence of malnutrition (under 5), 1989-95 (%) | 13 | N.A. | 45 | 22 |
| Babies with low birth weight, 1991 (%) | 9 | N.A. | N.A. | N.A. |
| Health Coverage Indicators | | | | |
| Children immunized with the third dose of DPT, 1990-91 (%) | 58 | 63 | 89 | 60 |
| Children immunized against measles, 1990-91 | 73 | 48 | 54 | 53 |
| Births attended by health staff, 1985 (%) | 36 | 19 | 27 | 35 |
| Medical Resources | | | | |
| Doctors per 1,000 population, 1988-92 | 0.48 | 0.44 | 1.04 | 0.64 |
| Nurse-to-doctor ratio, 1988-92 | 0.7 | 2.5 | 0.3 | 1.5 |
| Hospital beds per 1,000 population, 1985-90 | 1.3 | 1.7 | 1.7 | 1.5 |
| National Income and Health Expenditure | | | | |
| Per capita GNP, 1995 (US\$) | 800 | 1,340 | 1,390 | 1,610 |
| Per capita total health expenditure, 1990 (US\$) | 25 | 31 | 43 | 61 |
| Total health expenditure as a percentage of GNP, 1990 | 4.0 | 3.7 | 4.1 | 5.9 |
| Public health expenditure as a percentage of GNP, 1990 | 2.4 | 2.1 | 2.6 | 2.6 |
| Private health expenditure as a percentage of GNP, 1990 | 1.6 | 1.6 | 1.6 | 3.3 |
| Aid flows as a percentage of total health expenditure, 1990 | 20.3 | 11.1 | 7.0 | 13.9 |

Source: The World Bank, 1993, 1995 and 1997.

*Organized from left to right in ascending order according to per capita GNP in 1995.

2.2 Health Sector Organization

Guatemala's health sector comprises the public subsector, the private subsector, and non-governmental organizations (NGOs), each with a number of institutions dedicated to health care provision and financing. Traditional medicine is also an important part of health care provision.

The public subsector is made up of administrative agencies that operate both at the centralized and decentralized levels; they include: (1) the Ministry of Public Health and Social Assistance (*Ministerio de Salud Pública y Asistencia Social*, MSPAS), responsible for the public financing and delivery of health care; (2) the Guatemalan Social Security Institute (*Instituto Guatemalteco para la Seguridad Social*, IGSS); (3) Military Health (*Sanidad Militar*); (4) Municipal Health (*Sanidad Municipal*); and (5) the Social Welfare Secretariat (*Secretaria de Bienestar Social*).

The private subsector is made up of private practices and private institutions as well as NGOs. Approximately 9,000 medical doctors operate in the country privately, although a high proportion of them is concentrated in the capital city. It is estimated that 350 NGOs are active in the health sector, the majority of which holds no link to the MSPAS.

The role of the private subsector in the provision and financing of health care cannot be overlooked. In 1997 the public subsector accounted for almost 60 percent of all hospitalizations in Guatemala while private providers accounted for another 35 percent.⁴ Furthermore, 43 percent of all expenditures on health care are made in the private sector (see Table 2.1). Finally, there is an important subsector of traditional medicine, which comes from the Maya-Quiche culture, and whose participation in the health care system has been poorly studied.

⁴ Bitrán *et al.* 1998.

03. Public Finances and Government Health Spending

In 1991, about 45 percent of government revenue came from tax sources and 55 percent from non-tax sources (Table 3.1). Indirect taxes accounted for 33.7 percent of all revenues, while direct taxes represented only 11.1 percent. The Value Added Tax alone collected 14.6 percent of all resources. Two-thirds of all non-tax revenue was from internal and foreign loans.

Table 3.1 Total Government Revenue, 1991 (thousands of US\$)⁵

| Source | Amount | Percentage |
|-----------------------------------|---------------|--------------|
| Direct Taxes | | |
| Corporate and Personal Income Tax | 110.5 | 10.0 |
| Wealth Tax | 11.9 | 1.1 |
| Subtotal | 122.4 | 11.1 |
| Indirect Taxes | | |
| Tax on Value Added | 161.1 | 14.6 |
| Import Taxes | 117.3 | 10.7 |
| Taxes on Alcohol and Tobacco | 47.0 | 4.3 |
| Other Indirect Taxes | 45.5 | 4.1 |
| Subtotal | 370.9 | 33.7 |
| Total Tax Revenue | 493.3 | 44.8 |
| Special Non-Tax Revenue | 59.0 | 5.4 |
| Revenues From Improved Taxation | 100.4 | 9.1 |
| Transfers | 110.8 | 10.1 |
| Other Current Revenue | 9.4 | 0.9 |
| Revenues from Capital | | |
| Internal Loans | 159.6 | 14.5 |
| Foreign Loans | 168.3 | 15.3 |
| Total Non-Tax Revenue | 607.5 | 55.2 |
| Total Revenue | 1100.8 | 100.0 |

Source: La Forgia 1993.

⁵ The exchange rate in 1991 was Qz. 5.0289 = 1 US\$.

Table 3.2 presents the sources of financing of the Ministry of Health in 1989 and 1990. The distribution of sources did not vary substantially in these two years. Almost 80 percent came from direct and indirect taxes, the remaining being financed by loans (about 11.0 percent) and external assistance (around 8.5 percent). Cost recovery in public health facilities was very small.

**Table 3.2 Sources of Financing of Public Health Services
as a Percentage of Total Public Health Expenditure, 1989-90 (%)**

| Source | 1989 | 1990 |
|-------------------------------|------|------|
| Direct and Indirect Taxes | | |
| Ministry of Health | 68.4 | 71.0 |
| Other | 11.7 | 7.2 |
| Loans | 10.6 | 11.2 |
| External Assistance/Donations | 8.4 | 8.5 |
| User Fees | 0.8 | 0.6 |

Source: La Forgia 1993.

04. Household Survey

4.1 Introduction

The survey analysis discussed in this section draws on the 1997 Household Health Care Demand and Expenditure Survey (*Encuesta Nacional de Gastos y Asistencia Social*, ENGAS-97) carried out by Guatemala's National Statistical Institute in 1997 in four departments of Guatemala: Quetzaltenango, San Marcos, Sololá, and Totonicapán. Together these departments account for 15 percent of the country's total population. The aim of the survey was to study health care-seeking behavior and spending among Mayan Indians, hence the choice of four of the nation's departments with the highest concentration of Mayans. The survey was based on a representative sample of 2,600 households in the four departments.

4.2 Sample Design

According to the CENSUS-94, the combined population of the four departments was 1,643,463, of which three-fourths lived in rural areas. Table 4.1 shows the estimated population of each of the departments, and the final sample adopted for the survey. Annex B provides a detailed characterization of the universe (the four departments), according to gender, literacy rates, age composition, and household size.

Table 4.1 Total Population and Survey Sample

| Department | Population | Sample |
|----------------|------------------|--------------|
| Quetzaltenango | 503,857 | 578 |
| San Marcos | 645,418 | 803 |
| Sololá | 222,094 | 568 |
| Totonicapán | 272,094 | 654 |
| Total | 1,643,463 | 2,603 |

Source: CENSUS-94

To study health care-seeking behavior by different population groups, the analysis presents results according to the following four strata:

- ▲ Department
- ▲ Ethnic group (Native Mayan Indian or Ladino)
- ▲ Area (urban or rural)
- ▲ Per capita household spending quintiles

4.3 Household Survey Instrument

The survey questionnaire was divided into the following six sections (see Annex A for further detail): (1) self-perception of a health problem over a 30-day recall period and related use of health care; (2) total household consumption of and spending on goods and services (including household-produced goods); (3) health care spending by all household members in the last four weeks; (4) use of hospital services in the previous year; (5) use of obstetric services in the preceding year; and (6) immunizations for children under 3 years. Consumption and spending information is presented in Quetzales, Guatemala's national currency, and in U.S. dollars, at the observed exchange rate of 1 US\$ = 5.8 Qz in 1997.

4.4 Assessment of Socioeconomic Level

Several studies of health care demand carried out in developing countries have found a strong link between a household's socioeconomic status and both the incidence of health problems and the patterns of health care among household members. Assessing socioeconomic status is not a simple undertaking, however. This is particularly true in poor and rural communities where a good share of household consumption is self-produced, and where income flows are seasonal. Further, evidence indicates that households tend to under-report income in surveys.

Income, therefore, does not appear to be the most appropriate indicator of a household's socioeconomic status. The World Bank's Living Standards Measurement Surveys Division recommends measuring household consumption of goods and services as a variable that better reflects a household's permanent income and socioeconomic status. For several years now, household studies of health care demand in the developing world have adopted the above methodology. In those studies, a good part of the survey instrument is devoted to the measurement of household consumption; this was the case in Guatemala's ENGAS survey as well.

Using monthly household consumption of goods and services as a proxy for socioeconomic status, PHR researchers constructed consumption quintiles as a way of categorizing, and studying separately, illness incidence and health care consumption.

There are three methods to build quintiles. The method used throughout the body of this paper is per capita consumption quintiles based on the entire population, with Quintile 1 representing lowest consumption and Quintile 5 highest consumption. A second method is per capita consumption quintiles based separately on rural and urban populations, which more clearly represents consumption differences within each area. The third method is household consumption quintiles. Annex B includes characteristics by these three different quintile definitions.

4.5 Sample Characterization

Table 4.2 presents the population distribution by ethnic groups in the four departments. According to the current survey, over 90 percent of the population of Sololá and Totonicapán is Native Mayan, a result that coincides with the CENSUS-94. In the case of Quetzaltenango, the CENSUS-94 estimated a Native population of 60 percent, while according to ENGAS-97 it was 35 percent. This difference may be explained by the use of different definitions of Native origin, or by migration occurring in the time elapsed between the surveys.

Table 4.2 Population Distribution, by Ethnic Group and Department (%)

| | Department | | | | Total |
|--------------|----------------|-------------|-------------|-------------|--------------|
| | Quetzaltenango | San Marcos | Sololá | Totonicapán | |
| Population | | | | | |
| Native | 35.3 | 37.5 | 90.9 | 97.7 | 54.8 |
| Ladino | 63.5 | 62.4 | 8.6 | 1.8 | 45.1 |
| No data | 1.2 | 0.1 | 0.5 | 0.5 | 0.1 |
| Total | 26.9 | 42.1 | 13.6 | 17.3 | 100.0 |

The proportionately greater representation of the Native population in the lower quintiles (Table 4.3) indicates that this ethnic group is considerably poorer, or features significant lower consumption levels, than the Ladino group. In contrast, Quetzaltenango, which is predominantly Ladino, has a greater share of its population in the two highest quintiles.

Table 4.3 Distribution of Sample, by Quintile, Ethnic Group, and Department (%)

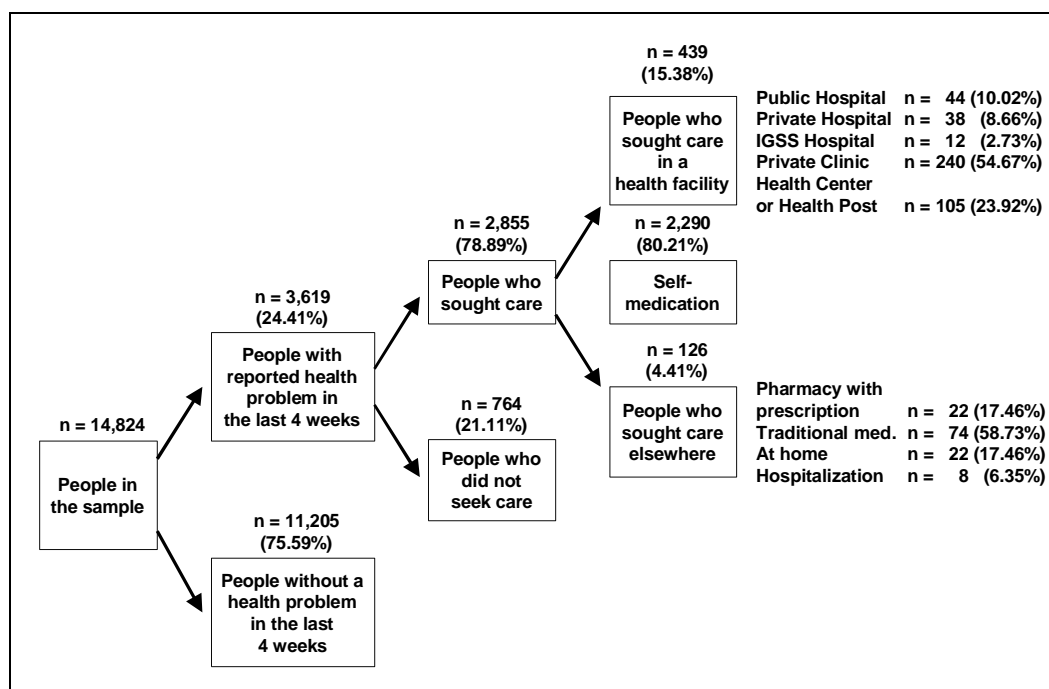
| | Quintile | | | | | Total |
|-------------------|-------------|-------------|-------------|-------------|-------------|--------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Population | | | | | | |
| Native | 73.0 | 66.0 | 62.8 | 42.6 | 28.1 | 54.7 |
| Ladino | 27.0 | 34.0 | 37.2 | 57.4 | 71.9 | 45.3 |
| Department | | | | | | |
| Quetzaltenango | 10.0 | 16.0 | 16.9 | 24.1 | 32.9 | 100.0 |
| San Marcos | 21.0 | 19.9 | 21.0 | 21.1 | 17.1 | 100.0 |
| Sololá | 29.5 | 23.8 | 19.8 | 14.3 | 12.6 | 100.0 |
| Totonicapán | 27.7 | 24.3 | 23.4 | 14.9 | 9.7 | 100.0 |
| Total | 20.4 | 20.2 | 20.2 | 19.9 | 19.4 | 100.0 |

05. Survey Results

This section presents main survey results divided into eight subsections: household consumption and its distribution; health problem perception over last 15 days; days inactive due to illness; health care-seeking behavior (last 15 days and annually); utilization of hospital services over the last 12 months; deliveries; consumption of medicines in the last 15 days; and health spending in the last year. Annexes noted in each subsection contain additional information.

As Figure 5.1 shows, about one-quarter of all those interviewed reported the occurrence of a health problem during the four-week period preceding the survey, and over three-quarters of them sought some form of health care. Self-medication was the most frequent form of care; 80 percent of all those seeking help choose this option. Only one out of six persons looking for care went to an ambulatory care health facility, while fewer than 5 percent obtained other services. The following sections provide further details about health care-seeking patterns.

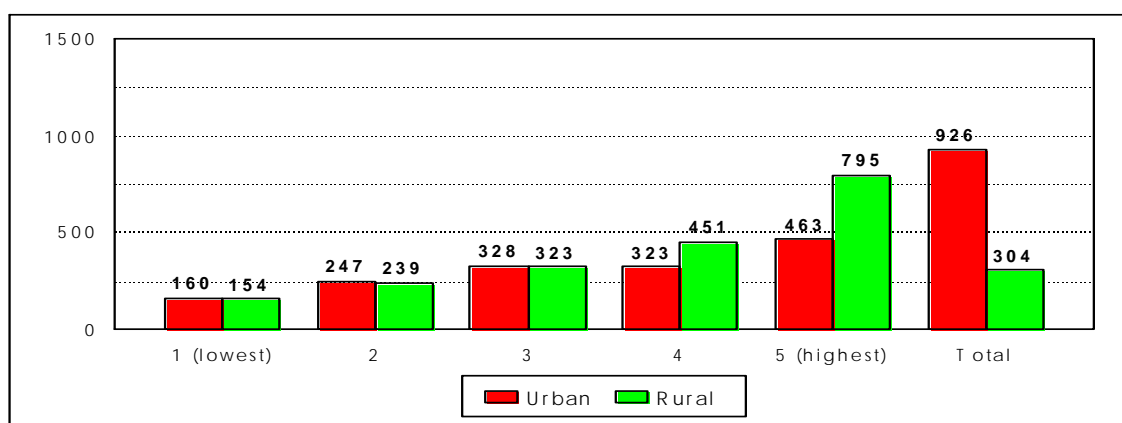
Figure 5.1 Health Care-Seeking Behavior



5.1 Household Consumption

Figure 5.2 presents information on per capita household consumption with consumption quintiles being defined over the entire sample (see also Annex C). In urban areas, annual per capita household consumption in the highest quintile (US\$926) is 5.7 times that of the first quintile (US\$160). Average per capita household consumption for the entire sample is US\$360 an amount well below Guatemala's per capita GNP of US\$1,340 in 1995 as reported by the *World Development Report 1997*. Although consumption and income need not coincide, they should not differ significantly. The large gap between per capita GNP and per capita household consumption, as measured by ENGAS-97, may be attributable to the fact that the four departments of this survey with their large Mayan populations are significantly poorer than the average department of Guatemala.

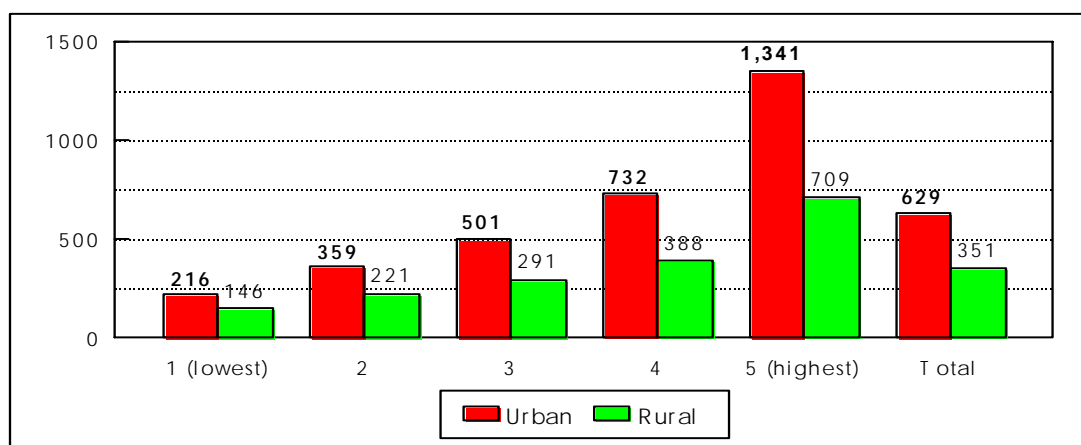
Figure 5.2 Average Annual Per Capita Household Consumption, by Area and Quintile*



*Quintiles defined based on total sample.

Figure 5.3 also shows per capita household consumption, with quintiles constructed separately for urban and rural households. The per capita consumption in each quintile in the urban area is almost twice the amount as rural settings, showing that the population in urban areas is much richer than its rural counterpart.

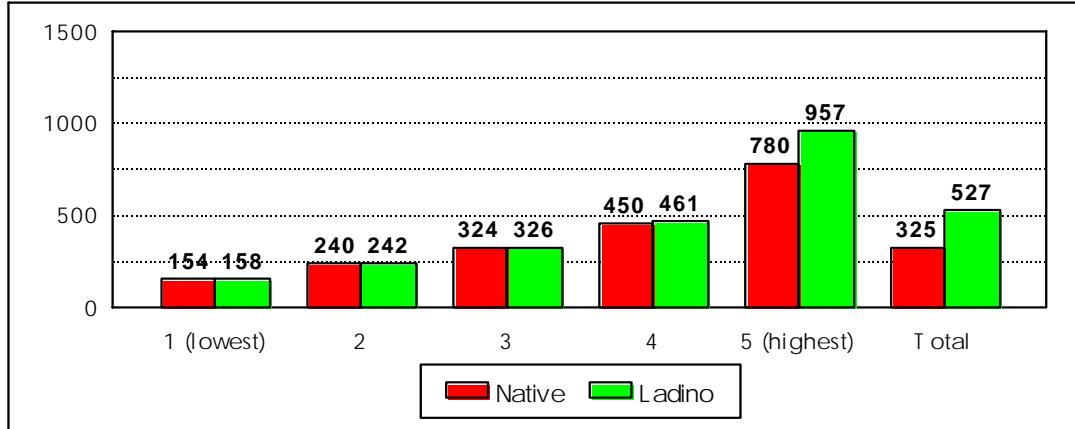
Figure 5.3 Average Annual Per Capital Household Consumption, by Area and Quintile*



*Quintiles defined separately for urban and rural samples.

Figure 5.4 shows that although the Ladino population tends to have higher consumption levels than the Native population in all quintiles, the differences are not very significant.

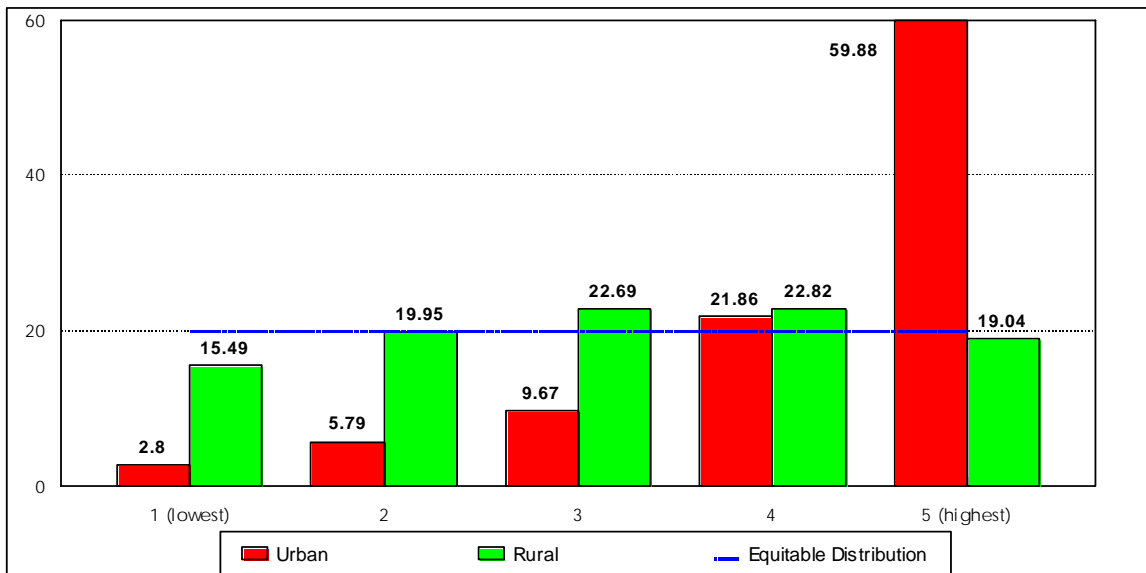
Figure 5.4 Average Annual Per Capita Household Consumption, by Ethnic Group and Quintile*



*Quintiles defined based on total sample.

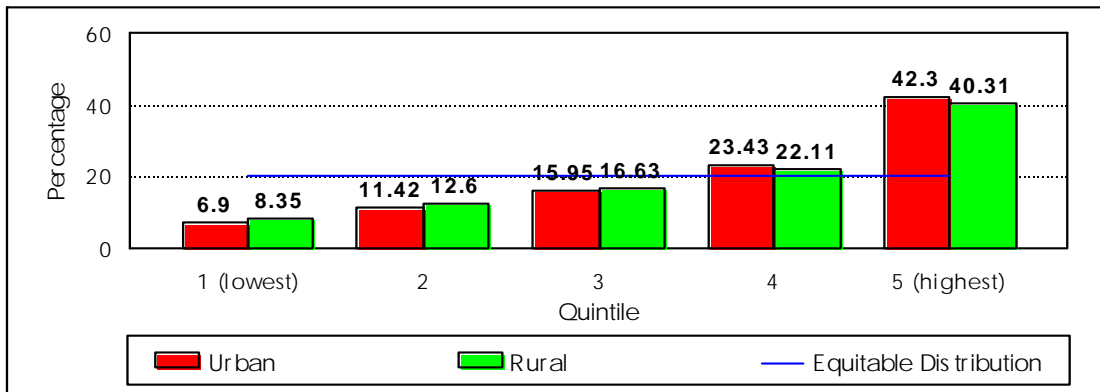
Figures 5.5 through 5.7 show the distribution of total consumption among quintiles, or what fraction of total consumption is accounted for by each quintile. Thus, the sum of the bars equals 100 percent. The distribution of consumption among quintiles is clearly inequitable in urban areas, when quintiles are defined over the entire sample (Figure 5.5). A quintile's share of total consumption increases with the consumption level, with the highest quintile capturing almost 60 percent of total consumption. The situation of rural households differs, however, because there are few high income families in rural areas. Nevertheless, when quintiles are constructed separately for urban and rural areas, the distribution of total consumption among quintiles seems less inequitable (Figure 5.6). The inequities are slightly less pronounced in the rural setting.

Figure 5.5 Distribution of Annual Per Capita Household Consumption, by Area and Quintile*



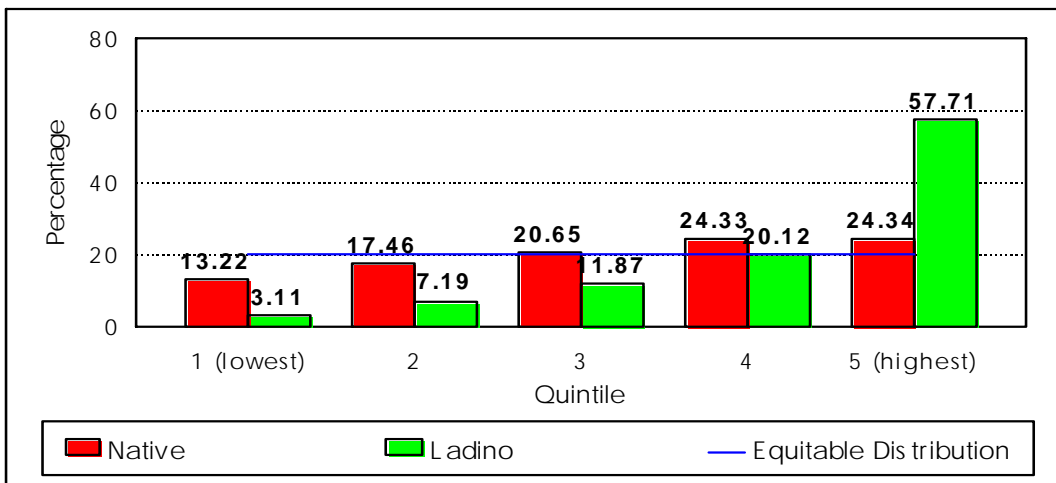
*Quintiles constructed over the entire sample.

Figure 5.6 Distribution of Annual Per Capita Household Consumption, by Area and Quintile*



Finally, Figure 5.7 presents the distribution of consumption among ethnic groups, with consumption quintiles being defined over the entire sample. Clearly, consumption is heavily skewed among Ladinos—with high income Ladino families accounting for almost 60 percent of all consumption in the Ladino group—and rather flat among the Mayans.

Figure 5.7 Distribution of Annual Per Capita Household Consumption, by Ethnic Group and Quintile



In this section household consumption quintiles have been defined in two ways: (1) over the entire sample and (2) separately for urban and rural areas. In the remainder of this paper, household consumption quintiles are defined over the entire sample.

5.2 Health Problem Perception

To study the health care seeking behavior this analysis first looks at illness reporting patterns measured by self-perception of health problem over a four-week recall period.

Self-perception of illness or injury is higher in the rural settings than in the urban areas. Overall, one out of four people in the rural areas perceived a health problem in the last month; among urban inhabitants, this proportion was one out of five. In the rural area self-perception of illness showed no relationship with income. In the urban area, the perception of health problems seemed to decrease slightly with income in the urban area.

Figure 5.8 Percentage Ill or Injured in the Last Four Weeks, by Area and Quintile

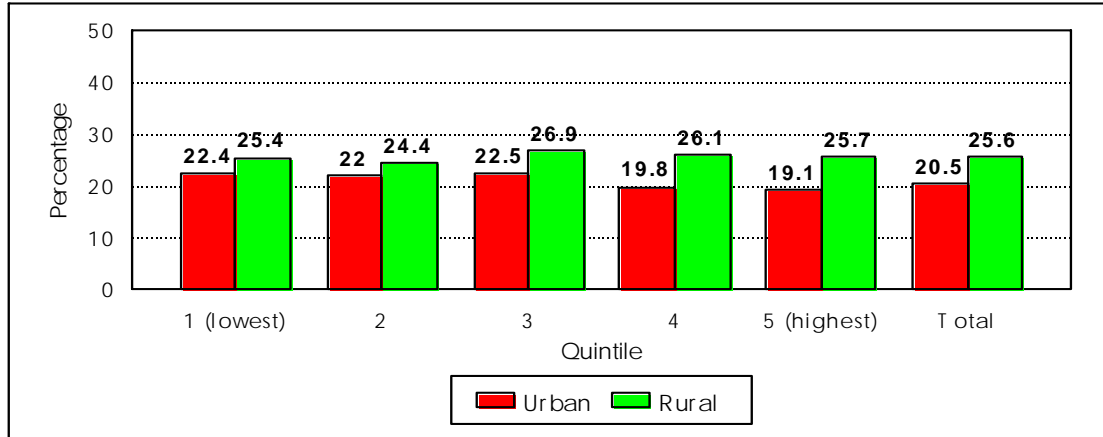
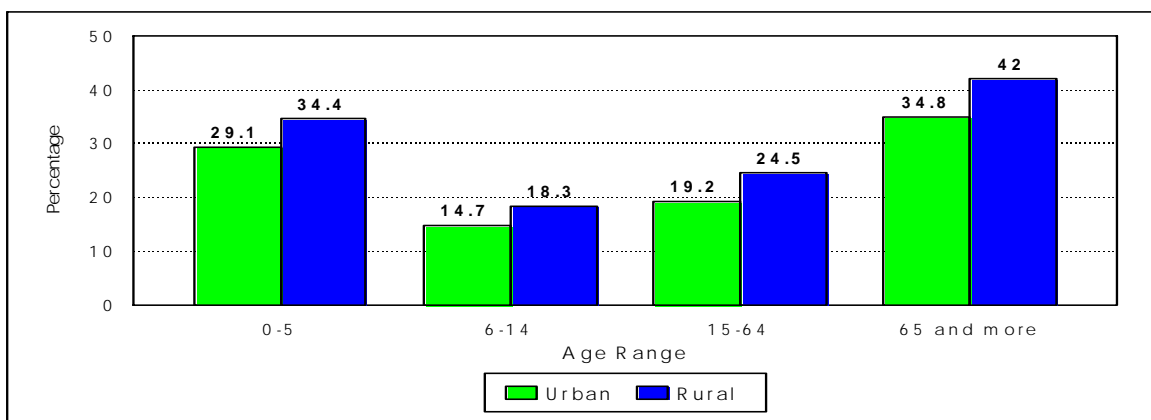


Figure 5.9 presents health problem perception by age range. A u-shape curve emerges indicating that the elder and the younger population groups have a higher perception of (and incidence) of health problems than other population groups. This is a common finding from surveys of this kind. About 26 percent of the Native population perceived a health problem while 22 percent of Ladinos did so. Yet, as is shown later in section 5.10, the joint probability of perceiving a health problem, seeking care, and paying for care is the same among Natives and Ladinos (15 percent).

Figure 5.9 Percentage Ill or Injured in the Last Four Weeks, by Area and Age Range



5.3 Days Inactive Due to Illness

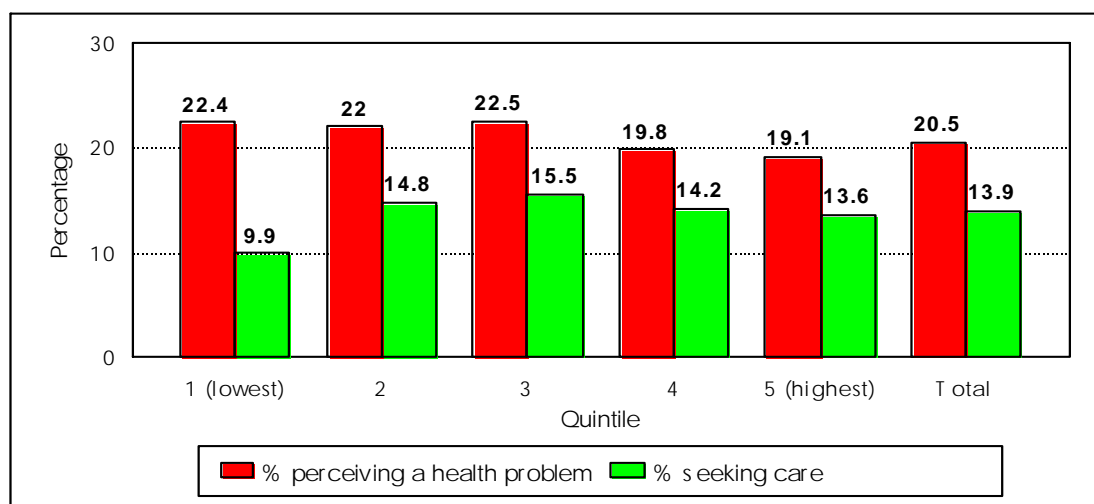
The number of days inactive due to ill health⁶ is a measure of the burden of disease. Annex E has more detailed data on the probability of missing regular activities and the average number of days spent inactive. One out of four people who get sick has to miss his or her regular activities, a proportion that remains stable across areas and quintiles. Nevertheless, when examining this indicator by age range, children between 6 and 14 more often miss their activities than the rest of the population.

5.4 Health Care-Seeking Behavior

This section examines the demand for health care by analyzing the actions taken by those who perceive a health problem.

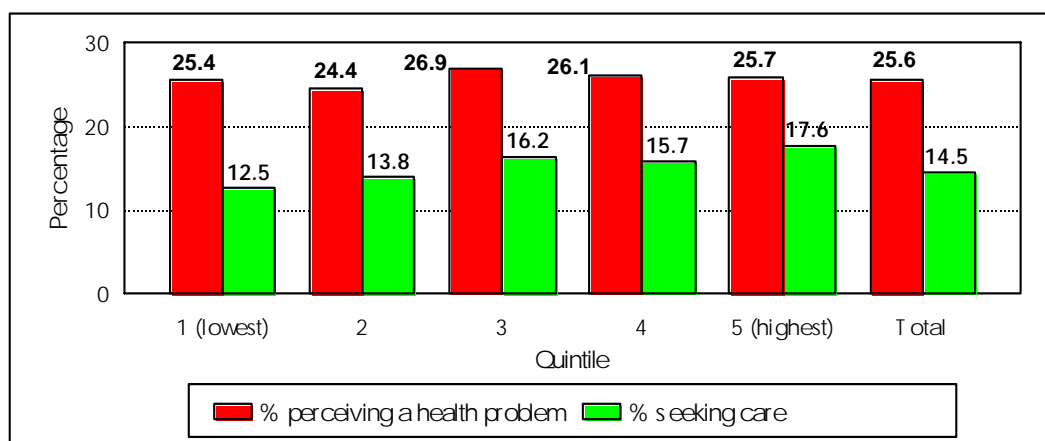
In the urban setting about two-thirds of those ill or injured sought care, while six in 10 did so in the rural area (Figures 5.10 and 5.11). This could partially be explained by the difference in accessibility between areas (Annex F) access to health care providers being better in urban areas. Furthermore, the number of those seeking care increased with consumption level, which may be attributable to two separate phenomena: First, higher income individuals, who tend to be more educated than the poor, are known to have a better ability to seek care accordingly. Second, the better-off have a greater ability to pay for care, and therefore face fewer financial barriers to access than the poor.

Figure 5.10 Percentage of Ill or Injured in the Past Four Weeks and Percentage Seeking Care in the Urban Area, by Quintile



⁶ Calculated only for the population over 6 years of age

Figure 5.11 Percentage Ill or Injured in the Past Four Weeks and Percentage Seeking Care in Rural Area, by Quintile



As already mentioned, Sololá has a predominantly poor Native population of which 36.2 percent self-reported an illness or injury (Figure 5.12) in the last four weeks, while Quetzaltenango, which has richer Ladino population, only has one-third of the problems presented in Sololá. This suggests the existence of an inverse relationship between health problem perception and income, while health care seeking behavior increases with income.

Figure 5.12 Percentage Perceiving a Health Problem and Percentage Seeking Care, by Department and Ethnic Group

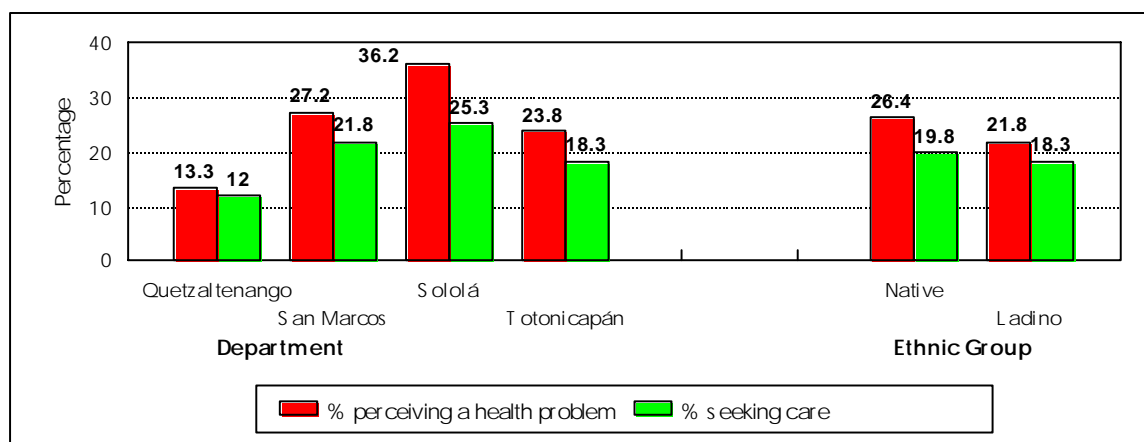
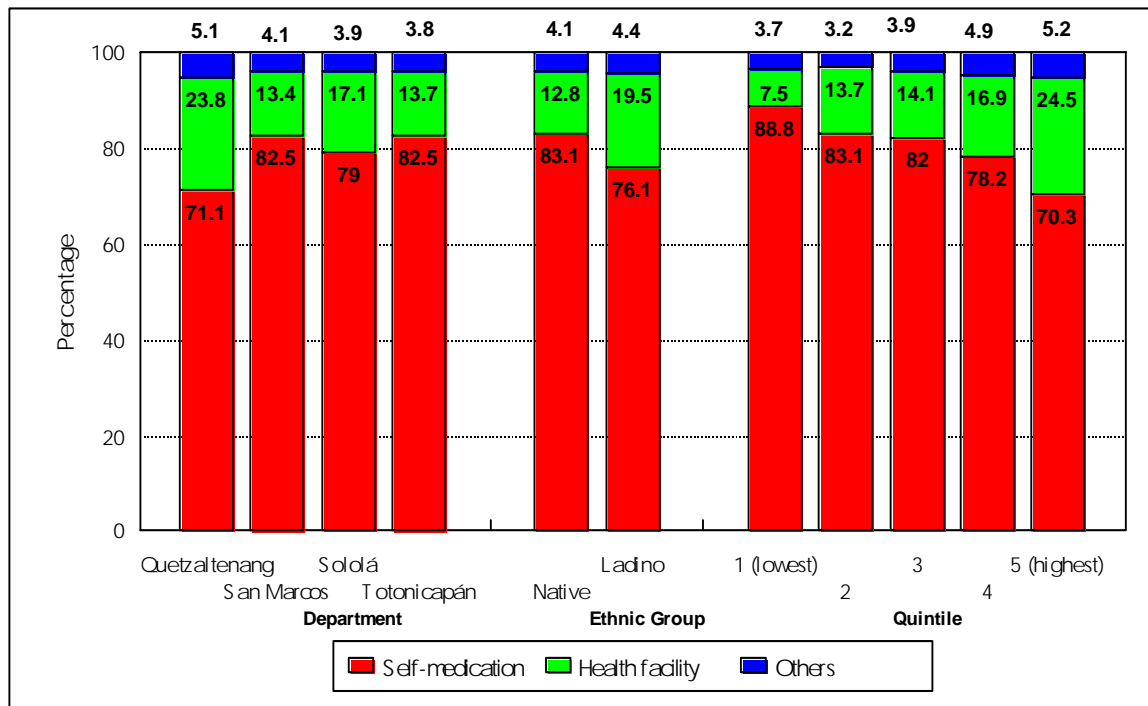


Figure 5.13 shows what actions were taken among those who perceived a health problem and sought care. Four out of five of those ill or injured chose self-medication as the first therapeutic action. Self-medication was higher in the lowest quintiles and among the Native population. That very few individuals with a self-perceived health problem chose to go to a health facility could be explained by a widespread limited physical access to health facilities.

Figure 5.13 Therapeutic Actions Among Those Who Sought Care, by Department, Ethnic Group, and Quintile



5.5 Choice of Provider

Another aspect of demand is the type of provider chosen. Once a person perceives a health problem and decides to seek care from a health facility, he or she must decide which provider to select. In general, 32 percent of the people sought care from a public provider, while another 60 percent did so in the private subsector. The preference for private providers increased with income. More people in poor rural settings chose private providers, this could be a problem with the availability of public providers in the rural area. For more detailed information see Annex G.

The percentage of those who were seen by a doctor (either in a health facility or at home) increased with household consumption both in the urban area and in the rural settings. It is important to note that in the case of the lowest quintile in the urban area only one-third saw a doctor.

5.6 Utilization of Hospital Services

Almost three-fourths (72 percent, Table 5.1) of all those seeking care from a health facility in the month preceding the survey selected a hospital (public and private). Such a high percentage of ambulatory health care being delivered in inpatient facilities is uncommon, and may be the result of a highly deficient ambulatory care market in these four Guatemalan departments, likely combined with a cultural belief that hospital-based care is superior to that delivered in outpatient facilities.

Use of hospital care for ambulatory purposes was significantly greater among urban households, a finding that may be explained by the generally urban location of public and private

hospitals, and therefore the greater physical accessibility of urban households to this kind of facility. Utilization of hospital services was also more common among higher-consumption households. This fact may reflect these households' relatively greater ability to pay out-of-pocket for the more expensive hospital care, in contrast with poorer households.

Table 5.1 Hospital Care Utilization in the Past Four Weeks, by Area and Quintile (Percent)

| | Quintile | | | | | Total |
|-------|---------------|-------|-------|-------|----------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | 21.72 | 73.75 | 87.46 | 81.42 | 91.03 | 83.58 |
| Rural | 45.65 | 48.55 | 72.72 | 77.95 | 85.28 | 66.43 |
| Total | 43.49 | 55.16 | 75.77 | 79.27 | 88.75 | 72.31 |

5.7 Prenatal Care and Immunizations

About 85 percent of all pregnant women received prenatal care in the past year (Figure 5.14), a percentage that is high in all quintiles. When the first prenatal visit took place, and how many visits were made, varied with household's consumption in the woman's home (not shown). Thus, women from low-consumption households tended to make their first pre-natal visit when further along into their pregnancy, and they made fewer total visits than women with greater means.

Figure 5.14 Percentage of Women Who Received Prenatal Care, by Area and Quintile

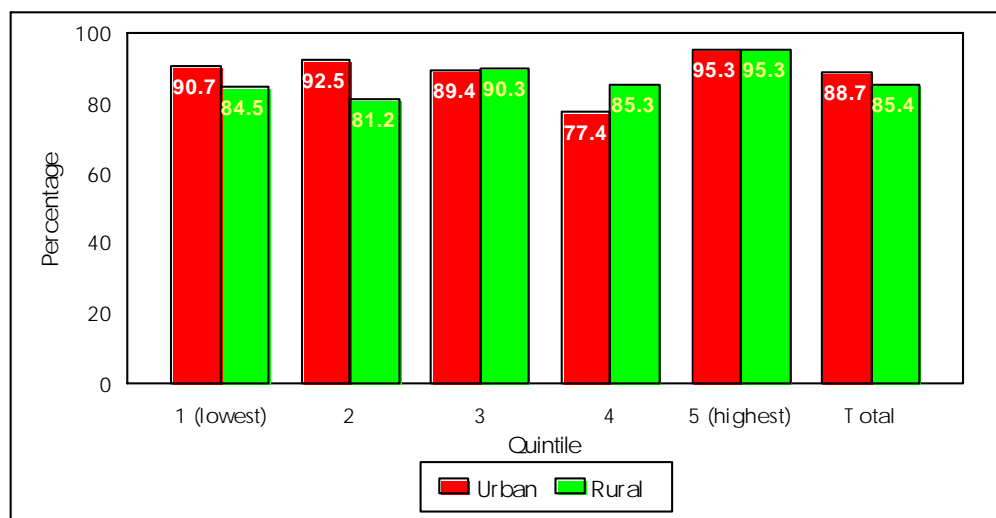


Table 5.2 shows immunization coverage for BCG, polio, DPT and measles among children under 18 months. Compliance with the immunization program is low, as only one out of four children under 18 months received all immunizations.

Table 5.2 Immunization Coverage of Children under 18 Months Who Presented an Immunization Identification Card, by Age Group

| | Age in months | | | | |
|---|---------------|------|------|------|-------|
| | Under 2 | 2-4 | 4-6 | 6-12 | 12-18 |
| Children with all immunizations (%) | 0.0 | 0.0 | 0.0 | 9.6 | 25.3 |
| Children under 18 months who received the following immunizations (%) | | | | | |
| BCG | 11.2 | 32.4 | 43.6 | 67.0 | 73.8 |
| ANTIPOLIO | | | | | |
| At birth | 34.1 | 48.1 | 41.6 | 57.8 | 51.8 |
| 2 months | 16.9 | 29.2 | 59.4 | 80.0 | 82.9 |
| 4 months | 1.2 | 4.8 | 30.2 | 54.8 | 69.9 |
| 6 months | 1.2 | 1.5 | 8.8 | 33.4 | 57.8 |
| DPT | | | | | |
| 2 months | 7.9 | 17.4 | 53.9 | 75.2 | 79.7 |
| 4 months | 1.2 | 2.7 | 26.2 | 52.1 | 67.8 |
| 6 months | 1.2 | 0.0 | 7.8 | 32.1 | 54.8 |
| MEASLES | 1.2 | 0.0 | 3.0 | 24.3 | 61.6 |

5.8 Deliveries

Only one out of five pregnant women chose to deliver their babies in a health facility—a very low percentage that may explain the high maternal mortality indices of Guatemala—and 82 percent of them went to a public hospital for their delivery. Two-thirds of all pregnant women had their deliveries at home with the assistance of a midwife. Use of facility-based care was greater among women from higher spending households (Table J.1).

5.9 Consumption of Medicines

A little over half of those persons with a health problem (Table K.2, Annex K), and more than three-fourths of those seeking care (Figure 5.3) bought medicines at a pharmacy with or without a prescription. Surprisingly, the probability that a patient received medicines at the facility where the medications were prescribed was higher in rural than in urban areas, a result that remained stable among households of all spending levels.

5.10 Health Spending

Table 5.3 presents information on monthly out-of-pocket spending on curative care for the entire sample, as well as for different subsets of individuals. Four measurements of out-of-pocket spending on curative health care are presented under the heading “Average expected expenditure.” The first measure, “All persons,” is the expected monthly expenditure of the average individual, including those who experience a health problem and those who do not. It equals US\$1.12, being higher for a Ladino person (US\$1.74) and lower for a Native person (US\$0.62). The second measure is the expected monthly expenditure of the individual who has an acute health problem. This measure is obviously higher than the preceding one, because it only considers those who are ill or injured. The expected monthly expenditure among this more restricted group is US\$4.81, or about four times as much as the expected expenditure of an average individual. The multiple of four reflects the probability of illness or injury, which is about 25 percent. Again, and as expected, this measure is much higher among Ladinos (US\$8.36) than Natives (US\$2.47). The third measure is expected spending by those with a health problem who

sought health care, while the fourth is expected expenditure by those who sought care and paid for the services received. Also as expected, and from the way these costs are computed by increasingly restricting the set of individuals, the third and fourth measures increase progressively and exceed the previous two. Thus a person with a health problem who seeks health care is expected to pay, on average, US\$6.09; those among this sample who actually pay out-of-pocket for the care received, spend on average US\$7.64 per episode of illness over one month.

The middle section of Table 5.3 presents out-of-pocket spending information for various types of health care, from home-made medicines to hospitalization. These expenditure data correspond to payments actually made by individuals who were ill or injured, sought care, and paid for the care received. As can be seen, for most expenditure categories, spending by the Ladino group exceeds that by the Natives. The gap is particularly large for hospital care, where the former spend on average US\$150, whereas the latter spend only US\$8.90 on average. It is worth noticing that spending on health professional fees for a visit (US\$14.50 for the sample) is similar to what people spend on medicines when they have a prescription (US\$16.43).

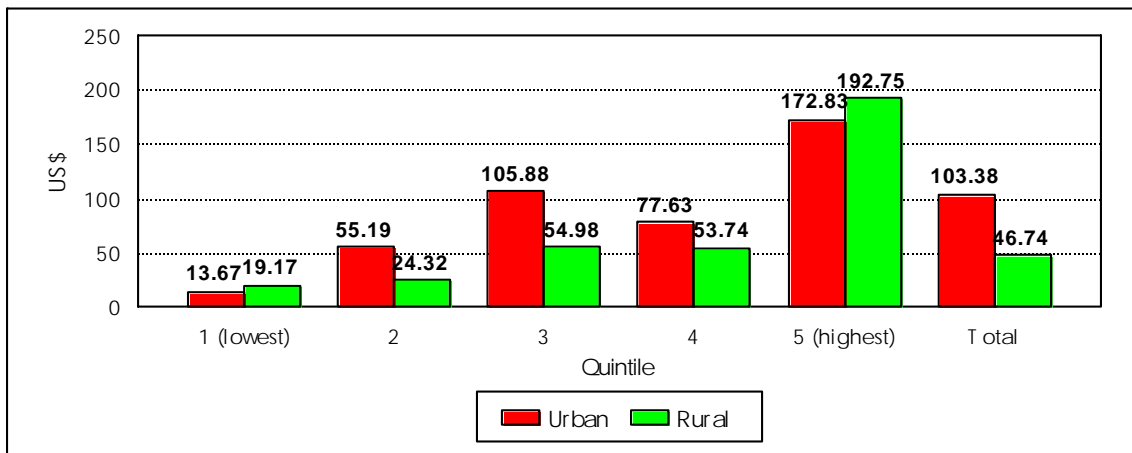
Table 5.3 Out-of-Pocket Spending and Time Costs of Care, by Ethnic Group

| | Ethnic Group | | Total |
|---|--------------|--------|--------|
| | Native | Ladino | |
| Persons who perceived a health problem (%) | 26.4 | 21.8 | 24.4 |
| Persons who perceived a health problem and sought care (%) | 19.9 | 18.4 | 19.3 |
| Persons who perceived a health problem and sought care and paid (%) | | | |
| Number | 331.5 | 219.2 | 556.6 |
| Percentage | 15.3 | 15.3 | 15.4 |
| Average expected expenditure (US\$) | | | |
| All persons | 0.62 | 1.74 | 1.12 |
| Persons with an acute health problem | 2.47 | 8.36 | 4.81 |
| Persons with an acute health problem and sought care | 3.26 | 9.93 | 6.09 |
| Persons with an acute health problem and sought care and paid | 4.22 | 11.93 | 7.64 |
| Average expenditure by type of care (US\$) | | | |
| Consumed home-made medicines, medicines kept at home or obtained from family or friends | 0.57 | 0.97 | 0.74 |
| Bought medicines at pharmacy without prescription | 2.05 | 2.72 | 2.33 |
| Bought medicines at pharmacy with prescription | 11.07 | 18.41 | 16.43 |
| Traditional medicine (traditional healer, midwife, etc.) | 7.05 | 10.24 | 8.38 |
| Home care | 5.07 | 1.98 | 3.67 |
| Health care in a facility | 8.93 | 19.28 | 14.50 |
| Hospitalization | 8.90 | 187.47 | 150.26 |
| Time to obtain care (minutes) | | | |
| Travel time | 56 | 52 | 54 |
| Waiting time | 58 | 48 | 53 |

The final section of Table 5.3 shows travel time to, and waiting time at the place of care, the figure shown being an average for all sources of care (i.e., pharmacy, health facility, etc.). Travel and waiting times are similar—about one hour—with only small differences between Natives and Ladinos.

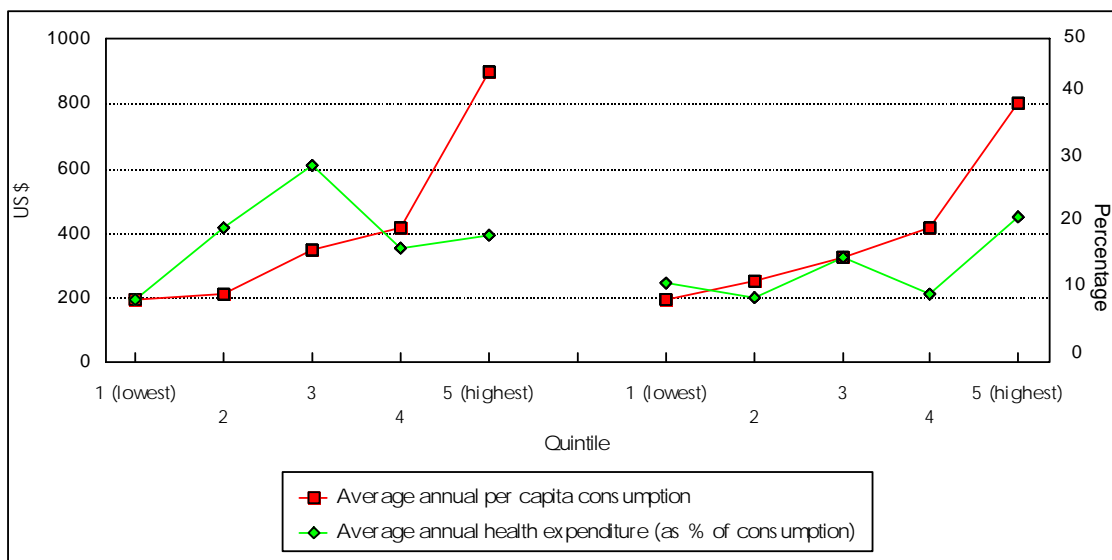
Figure 5.15 presents average annual per capita expenditure on curative ambulatory health care according to household spending quintiles. These figures correspond to the category “All persons” of Table 5.3 (times 12 months in a year), and therefore includes the entire population in the sample, adjusted by the probabilities of being ill or injured during the year (once or more), of seeking care when ill or injured, and of making out-of-pocket spending for the care received. In both urban and rural areas expenditure tends to increase with household consumption, reflecting both the greater cultural, physical, and economic access to care by those living in better off households. Also, and for similar reasons, income is higher in the urban settings than in the rural area.

Figure 5.15 Average Annual Per Capita Health Expenditure, by Area and by Quintile (in US\$)



Finally, Figure 5.16 contrasts out-of-pocket health spending on curative care with total consumption at the household level, with the former being expressed as a percentage of the latter. As can be seen on the left hand-side of the figure, health spending as a percentage of household consumption follows an irregular pattern in urban areas: it is progressive for the first three quintiles, but then becomes regressive when considering the highest two quintiles. The situation is somewhat different in rural areas. Out-of-pocket spending appears to be slightly progressive, although for the lowest four quintiles it seems to be rather proportional.

Figure 5.16 Average Annual Per Capita Consumption and Average Annual Per Capita Health Expenditure by Area and Quintile



06. Conclusions

Income is unevenly distributed in the four departments of Guatemala where the survey took place. High income individuals who belong to consumption quintile 5 consume about 6 times as much per capita as their poorest counterparts from quintile 1. This spread is significantly more pronounced in urban than in rural areas, and somewhat sharper among Ladinos than Mayans. This paper explored, among other things, whether these differences in household socioeconomic status, as measured by per capita consumption, lead to differences in health care-seeking and spending patterns.

Differences in household consumption (as a proxy for income) do not seem to affect household members' health problem perception. Approximately one in five interviewees reported a perceived health problem over a one-month recall period. The propensity to seek care varied moderately with household consumption in rural areas, but seemed unaffected by household consumption in urban settings.

Household ability to pay for health services, as proxied by household consumption, seemed to make a difference when it came to the choice of mode of care. Whereas self-medication was highly frequent among all household groups, it was highest among the poorest households, and it declined with overall household consumption levels. This pattern signals an important difference in access to different types of care. Self-medication is the least expensive and most readily available form of treatment, and therefore is the preferred option among the poor. But, because a trained health care provider does not intervene in this therapeutic modality, self-medication is also the least appropriate form of care for many health problems. That facility-based care was so low overall (only one-fourth of ill or injured high-consumption household members sought care from a health facility) suggests that health care facilities have restricted physical access or offer services that are relatively expensive.

Whereas differences in illness or injury perception and in provider choice are not dramatic among household groups, differences in out-of-pocket spending are large. This suggests that whereas poor and non-poor individuals may exhibit similar patterns of provider choice, the quality of the providers seen within each provider category may vary positively according to ability to pay. Thus, individuals in quintile 5 spend annually almost 14 times more on health care than those in the bottom quintile. And Ladinos spend almost three times as much on health care than the Mayans.

The latter finding, combined with the knowledge that the health problems of the poor tend to be more severe than those occurring among the rich, indicates that curative health care is highly inequitable in delivery. Inequities in financing are less pronounced and are less important from a health policy viewpoint.

Health care delivery is therefore highly inequitable in the four Guatemalan departments studied. A deficient public health care system is likely to be at the base of this problem. Closing

equity gaps in delivery, and also in financing, requires increased public health spending, either directly in government health facilities, or indirectly in income subsidies for the poor.

Annex A. Universe and Sample

A. Universe and Sample

Table A.1 Population of Four Selected Departments, by Sex, Ethnic Group and Area

| | Department | | | | Total |
|------------------|----------------|------------|--------|-------------|---------|
| | Quetzaltenango | San Marcos | Sololá | Totonicapán | |
| Total population | 503857 | 645418 | 222094 | 272094 | 1643643 |
| Male | 248162 | 323323 | 110618 | 132670 | 814773 |
| Female | 255695 | 322095 | 111476 | 139424 | 828690 |
| Urban | 200727 | 83890 | 73856 | 29188 | 387661 |
| Rural | 303130 | 561528 | 148238 | 242906 | 1255802 |
| Native | 300115 | 274098 | 207927 | 257123 | 1039263 |
| Ladino | 194048 | 355376 | 10576 | 8174 | 568170 |
| No data | 9694 | 15944 | 3595 | 6797 | 36030 |

Source: 1994 Census

Table A.2 Household Survey Questionnaire Contents

| Section | Content |
|---|--|
| Characterization of household members and health problem perception | Name, age, sex activity, education and each members' relationship with the head of the household Health problem perception in a 4-week recall period. Hospitalization in the past year. Identification of women at fertile age over 15 and children under 3 |
| Household expenditure | Household expenditures on consumption and investment goods in the past 7, 30 and 180 days. |
| Health care services in the past four weeks | Health problem description; days inactive due to illness or injury; self-medication; search for care outside the household; choice of provider; care received; out-of-pocket payments; and travel and waiting times to receive care. As well as search of preventive care. |
| Hospital services | Hospital used; period of time hospitalized; out-of-pocket payments; and, travel and waiting times to receive care. |
| Obstetric services | Among deliveries since January 1995 the following aspects were evaluated: prenatal care; choice of provider; out-of-pocket payments and travel and waiting times to receive care. Also family planning methods and awareness for women between 15 and 49 years. |
| Immunization of children under 3 | Immunizations included or not on the immunizations card. |

Annex B. Sample Characterization

Table B.1 Sex Distribution, by Quintile

| | | Quintile | | | | | |
|---------------------------------|----------|------------|-------|-------|-------|-------------|-------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Household consumption quintile | | | | | | | |
| Male | row % | 14.46 | 18.69 | 21.53 | 22.49 | 22.83 | 100 |
| | column % | 48.03 | 46.84 | 49.26 | 49.04 | 49.3 | 48.57 |
| Female | row % | 14.78 | 20.03 | 20.95 | 22.07 | 22.17 | 100 |
| | column % | 51.97 | 53.16 | 50.74 | 50.96 | 50.7 | 51.43 |
| Total | row % | 14.63 | 19.38 | 21.23 | 22.27 | 22.49 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Per capita consumption quintile | | | | | | | |
| Male | row % | 26.02 | 21.93 | 20.14 | 17.95 | 13.96 | 100 |
| | column % | 49.08 | 47.5 | 48.51 | 48.89 | 49.02 | 48.57 |
| Female | row % | 25.49 | 22.89 | 20.19 | 17.72 | 13.72 | 100 |
| | column % | 50.92 | 52.5 | 51.49 | 51.11 | 50.98 | 51.43 |
| Total | row % | 25.75 | 22.42 | 20.17 | 17.83 | 13.84 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |

Table B.2 Percentage of People in the Household Who Know How to Read, by Quintile

| | | Quintile | | | | | |
|---------------------------------|----------|------------|-------|-------|-------|-------------|-------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Household consumption quintile | | | | | | | |
| Yes | row % | 10.29 | 16.29 | 19.29 | 23.75 | 30.37 | 100 |
| | column % | 45.99 | 54.45 | 59.42 | 67.16 | 80.83 | 63.41 |
| No | row % | 20.97 | 23.68 | 22.85 | 20.2 | 12.3 | 100 |
| | column % | 53.4 | 45.12 | 40.11 | 32.56 | 18.65 | 36.14 |
| Does not know | row % | 36.98 | 25.89 | 12.8 | 0 | 24.32 | 100 |
| | column % | 0.24 | 0.12 | 0.06 | 0 | 0.09 | 0.09 |
| Other | row % | 14.71 | 16 | 23.94 | 17.12 | 28.23 | 100 |
| | column % | 0.37 | 0.3 | 0.41 | 0.27 | 0.42 | 0.36 |
| Total | row % | 14.19 | 18.97 | 20.59 | 22.42 | 23.82 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Per capita consumption quintile | | | | | | | |
| Yes | row % | 19.79 | 19.77 | 20.05 | 20.54 | 19.85 | 100 |
| | column % | 51.62 | 57.24 | 63.89 | 70.2 | 82.05 | 63.41 |
| No | row % | 32.18 | 25.51 | 19.66 | 15.09 | 7.56 | 100 |
| | column % | 47.85 | 42.11 | 35.71 | 29.38 | 17.81 | 36.14 |
| Does not know | row % | 51.5 | 24.18 | 6.47 | 6.47 | 11.37 | 100 |
| | column % | 0.19 | 0.1 | 0.03 | 0.03 | 0.07 | 0.09 |
| Other | row % | 22.73 | 33.19 | 20.78 | 20.05 | 3.25 | 100 |
| | column % | 0.33 | 0.54 | 0.37 | 0.39 | 0.08 | 0.36 |
| Total | row % | 24.31 | 21.9 | 19.9 | 18.56 | 15.34 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |

Table B.3 Sample Age Composition, by Quintile

| | | Quintile | | | | | |
|---------------------------------|----------|------------|-------|-------|-------|-------------|-------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Household consumption quintile | | | | | | | |
| 0-5 | row % | 16.41 | 21.05 | 23.84 | 21.64 | 17.06 | 100 |
| | column % | 22.1 | 21.4 | 22.13 | 19.15 | 14.94 | 19.7 |
| 6-14 | row % | 13.66 | 19.38 | 21.34 | 23.23 | 22.4 | 100 |
| | column % | 25.84 | 27.67 | 27.82 | 28.86 | 27.57 | 27.68 |
| 15-64 | row % | 13.15 | 18.44 | 20.39 | 22.69 | 25.33 | 100 |
| | column % | 43.01 | 45.53 | 45.95 | 48.74 | 53.9 | 47.85 |
| 65 and more | row % | 27.76 | 21.92 | 18.25 | 15.15 | 16.92 | 100 |
| | column % | 9.05 | 5.39 | 4.1 | 3.24 | 3.59 | 4.77 |
| Total | row % | 14.63 | 19.38 | 21.23 | 22.27 | 22.49 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Per capita consumption quintile | | | | | | | |
| 0-5 | row % | 31.62 | 24.56 | 21.25 | 14.87 | 7.7 | 100 |
| | column % | 24.2 | 21.58 | 20.77 | 16.43 | 10.97 | 19.7 |
| 6-14 | row % | 29.86 | 23.39 | 19.72 | 16.86 | 10.17 | 100 |
| | column % | 32.1 | 28.88 | 27.06 | 26.16 | 20.34 | 27.68 |
| 15-64 | row % | 21.47 | 21.11 | 20.37 | 19.04 | 18.02 | 100 |
| | column % | 39.9 | 45.05 | 48.33 | 51.08 | 62.31 | 47.85 |
| 65 and more | row % | 20.53 | 21.09 | 16.25 | 23.62 | 18.52 | 100 |
| | column % | 3.8 | 4.49 | 3.84 | 6.32 | 6.38 | 4.77 |
| Total | row % | 25.75 | 22.42 | 20.17 | 17.83 | 13.84 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |

Table B.4 Average Number of Household Members, by Area and Quintile

| Table B1 Average Number of Household Members, by Area and Quintile | | | | | | |
|--|------------|------|------|------|-------------|-------|
| | Quintile | | | | | Total |
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Household consumption quintile | | | | | | |
| Urban | 4.6 | 5.5 | 6.12 | 6.45 | 7.01 | 6.47 |
| Rural | 5.32 | 6.61 | 7.23 | 7.64 | 8.69 | 7.07 |
| Total | 5.23 | 6.52 | 7.04 | 7.38 | 7.83 | 6.93 |
| Per capita consumption quintile | | | | | | |
| Urban | 8.08 | 7.49 | 7.06 | 6.66 | 5.25 | 6.47 |
| Rural | 8.34 | 7.38 | 6.68 | 5.85 | 4.33 | 7.07 |
| Total | 8.32 | 7.4 | 6.75 | 6.13 | 4.88 | 6.93 |

Note: It represents the average number of people per area.

Figure B.1 Average Number of Household Members, by Area and Quintile

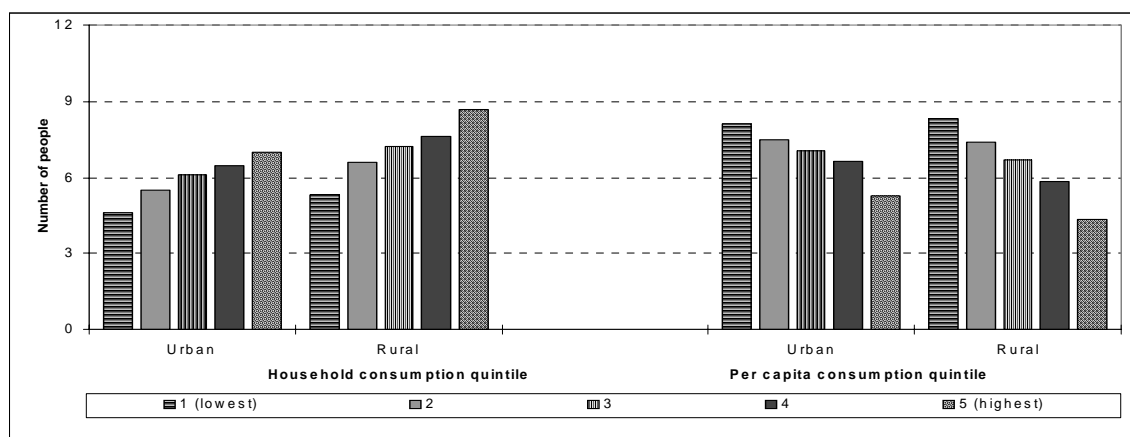


Table B.5 Household Distribution, by Area and Quintile

| | | Quintile | | | | | |
|---------------------------------|----------|------------|-------|-------|-------|-------------|-------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Household consumption quintile | | | | | | | |
| Urban | row % | 7.39 | 7.07 | 15.84 | 20.47 | 49.23 | 100 |
| | column % | 11.76 | 8.49 | 17.36 | 21.39 | 50.93 | 23.27 |
| Rural | row % | 16.82 | 23.12 | 22.86 | 22.82 | 14.38 | 100 |
| | column % | 88.24 | 91.51 | 82.64 | 78.61 | 49.07 | 76.73 |
| Total | row % | 14.63 | 19.38 | 21.23 | 22.27 | 22.49 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Per capita consumption quintile | | | | | | | |
| Urban | row % | 9.59 | 12.86 | 16.18 | 25.89 | 35.48 | 100 |
| | column % | 8.67 | 13.35 | 18.67 | 33.78 | 59.66 | 23.27 |
| Rural | row % | 30.65 | 25.32 | 21.37 | 15.39 | 7.27 | 100 |
| | column % | 91.33 | 86.65 | 81.33 | 66.22 | 40.34 | 76.73 |
| Total | row % | 25.75 | 22.42 | 20.17 | 17.83 | 13.84 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |

Table B.6 Age Range Distribution, by Ethnic Group

| | Ethnic Group | | |
|-------------|--------------|--------|-------|
| | Native | Ladino | Total |
| 0-5 | 20.39 | 18.65 | 19.61 |
| 6-14 | 28.43 | 26.59 | 27.61 |
| 15-64 | 46.51 | 49.76 | 47.96 |
| 65 and more | 4.67 | 5 | 4.82 |
| Total | 100 | 100 | 100 |

Table B.7 Area Distribution, by Ethnic Group

| | Ethnic groupG | | |
|----------|---------------|--------|-------|
| | Native | Ladino | Total |
| Urban | | | |
| row % | 41.76 | 58.24 | 100 |
| column % | 17.73 | 30.83 | 23.56 |
| Rural | | | |
| row % | 59.74 | 40.26 | 100 |
| column % | 82.27 | 69.17 | 76.44 |
| Total | | | |
| row % | 55.5 | 44.5 | 100 |
| column % | 100 | 100 | 100 |

Table B.8 First Action Distribution, by Ethnic Group

| | Ethnic Group | | Total |
|---|--------------|--------|-------|
| | Native | Ladino | |
| Home made medicines | 19.12 | 15 | 17.37 |
| Medicines at home | 6.22 | 9.47 | 7.6 |
| Medicines from family | 0.96 | 1.38 | 1.14 |
| Bought medicines at pharmacy without prescription | 56.76 | 49.98 | 53.89 |
| Bought medicines at pharmacy with prescription | 0.33 | 1.38 | 0.77 |
| Home of healer, doctor or midwife | 3 | 2.09 | 2.62 |
| Received care at home | 0.74 | 0.87 | 0.79 |
| Health facility | 12.71 | 18.96 | 15.35 |
| Hospitalized | 0.12 | 0.51 | 0.29 |
| Other | 0.04 | 0.36 | 0.17 |
| Total | 100 | 100 | 100 |

Annex C. Household and Per Capita Consumption

Table C.1 Average Annual Household Consumption

| | | Quintile | | | | | |
|---------------------------------------|-----------|------------|----------|----------|----------|-------------|----------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Per capita consumption quintile | | | | | | | |
| Urban | Quetzales | 7546.56 | 10712.81 | 13323.8 | 17956.04 | 27170.91 | 18545.79 |
| | US \$ | 1301.13 | 1847.04 | 2297.21 | 3095.87 | 4684.64 | 3197.55 |
| Rural | Quetzales | 7346.09 | 10227.29 | 12439.28 | 15248.77 | 19216.02 | 11243.51 |
| | US \$ | 1266.57 | 1763.33 | 2144.7 | 2629.1 | 3313.11 | 1938.54 |
| Total | Quetzales | 7363.46 | 10292.09 | 12604.45 | 16163.26 | 23962.28 | 12942.57 |
| | US \$ | 1269.56 | 1774.5 | 2173.18 | 2786.77 | 4131.43 | 2231.48 |
| Household consumption quintile | | | | | | | |
| Urban | Quetzales | 4799.45 | 7743.13 | 10117.08 | 13857.85 | 26822.41 | 18545.79 |
| | US \$ | 827.49 | 1335.02 | 1744.32 | 2389.28 | 4624.55 | 3197.55 |
| Rural | Quetzales | 4853.08 | 7636.73 | 10174.45 | 13629 | 22428.52 | 11243.51 |
| | US \$ | 836.74 | 1316.68 | 1754.22 | 2349.83 | 3866.99 | 1938.54 |
| Total | Quetzales | 4846.77 | 7645.76 | 10164.5 | 13677.95 | 24666.23 | 12942.57 |
| | US \$ | 835.65 | 1318.23 | 1752.5 | 2358.27 | 4252.8 | 2231.48 |
| Urban per capita consumption quintile | | | | | | | |
| Urban | Quetzales | 8260.58 | 12045.04 | 16262.1 | 20484.16 | 28154.71 | 17023.16 |
| | US \$ | 1424.24 | 2076.73 | 2803.81 | 3531.75 | 4854.26 | 2935.03 |
| Rural per capita consumption quintile | | | | | | | |
| Rural | Quetzales | 6400.71 | 8480 | 10032.97 | 11594.24 | 15102.14 | 10318.96 |
| | US \$ | 1103.57 | 1462.07 | 1729.82 | 1999.01 | 2603.82 | 1779.13 |

Table C.2 Total Annual Household Consumption Distribution, by Quintile

| | | Quintile | | | | | |
|---------------------------------|----------|------------|-------|-------|-------|-------------|-------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Per capita consumption quintile | | | | | | | |
| Urban | row % | 3.9 | 7.43 | 11.63 | 25.06 | 51.98 | 100 |
| | column % | 8.88 | 13.89 | 19.74 | 37.53 | 67.65 | 33.34 |
| Rural | row % | 20.02 | 23.03 | 23.65 | 20.87 | 12.43 | 100 |
| | column % | 91.12 | 86.11 | 80.26 | 62.47 | 32.35 | 66.66 |
| Total | row % | 14.65 | 17.83 | 19.64 | 22.27 | 25.62 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Household consumption quintile | | | | | | | |
| Urban | row % | 1.91 | 2.95 | 8.64 | 15.3 | 71.2 | 100 |
| | column % | 11.64 | 8.59 | 17.28 | 21.67 | 55.38 | 33.34 |
| Rural | row % | 7.26 | 15.7 | 20.69 | 27.66 | 28.69 | 100 |
| | column % | 88.36 | 91.41 | 82.72 | 78.33 | 44.62 | 66.66 |
| Total | row % | 5.48 | 11.45 | 16.67 | 23.54 | 42.86 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |

Table C.3 Average Annual per Capita Household Consumption, by Area and Quintile

| | | Quintile | | | | | |
|---------------------------------------|-----------|------------|---------|---------|---------|-------------|---------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Per capita consumption quintile | | | | | | | |
| Urban | Quetzales | 928.53 | 1431.8 | 1900.76 | 2686.15 | 5368.2 | 3180.71 |
| | US \$ | 160.09 | 246.86 | 327.72 | 463.13 | 925.55 | 548.4 |
| Rural | Quetzales | 890.51 | 1388.51 | 1870.78 | 2613.55 | 4613.15 | 1762 |
| | US \$ | 153.54 | 239.4 | 322.55 | 450.61 | 795.37 | 303.79 |
| Total | Quetzales | 893.8 | 1394.29 | 1876.38 | 2638.07 | 5063.65 | 2092.1 |
| | US \$ | 154.1 | 240.39 | 323.51 | 454.84 | 873.04 | 360.71 |
| Household consumption quintile | | | | | | | |
| Urban | Quetzales | 1336.5 | 1710.58 | 1987.17 | 2496.24 | 4337.38 | 3180.71 |
| | US \$ | 230.43 | 294.93 | 342.62 | 430.39 | 747.82 | 548.4 |
| Rural | Quetzales | 1095.47 | 1350.07 | 1613.73 | 2032.03 | 3010.82 | 1762 |
| | US \$ | 188.87 | 232.77 | 278.23 | 350.35 | 519.11 | 303.79 |
| Total | Quetzales | 1123.81 | 1380.66 | 1678.56 | 2131.32 | 3686.41 | 2092.1 |
| | US \$ | 193.76 | 238.05 | 289.41 | 367.47 | 635.59 | 360.71 |
| Urban per capita consumption quintile | | | | | | | |
| Urban | Quetzales | 1254.78 | 2083.71 | 2905.84 | 4243.59 | 7778.68 | 3645.98 |
| | US \$ | 216.34 | 359.26 | 501.01 | 731.65 | 1341.15 | 628.62 |
| Rural per capita consumption quintile | | | | | | | |
| Rural | Quetzales | 848.88 | 1280.95 | 1688.02 | 2248.78 | 4109.77 | 2033.9 |
| | US \$ | 146.36 | 220.85 | 291.04 | 387.72 | 708.58 | 350.67 |

Table C.4 Annual per Capita Consumption Distribution

| | | Quintile | | | | | |
|---------------------------------------|----------|------------|-------|-------|-------|-------------|-------|
| | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Per capita consumption quintile | | | | | | | |
| Urban | row % | 2.8 | 5.79 | 9.67 | 21.86 | 59.88 | 100 |
| | column % | 9 | 13.71 | 18.92 | 34.39 | 63.25 | 35.37 |
| Rural | row % | 15.49 | 19.95 | 22.69 | 22.82 | 19.04 | 100 |
| | column % | 91 | 86.29 | 81.08 | 65.61 | 36.75 | 64.63 |
| Total | row % | 11 | 14.94 | 18.09 | 22.48 | 33.49 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Household consumption quintile | | | | | | | |
| Urban | row % | 3.11 | 3.8 | 9.89 | 16.07 | 67.13 | 100 |
| | column % | 13.99 | 10.51 | 20.55 | 25.05 | 59.92 | 35.37 |
| Rural | row % | 10.46 | 17.71 | 20.94 | 26.31 | 24.58 | 100 |
| | column % | 86.01 | 89.89 | 79.45 | 74.95 | 40.08 | 64.63 |
| Total | row % | 7.86 | 12.79 | 17.03 | 22.69 | 39.63 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Urban per capita consumption quintile | | | | | | | |
| Urban | row % | 6.9 | 11.42 | 15.95 | 23.43 | 42.3 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural per capita consumption quintile | | | | | | | |
| Rural | row % | 8.35 | 12.6 | 16.63 | 22.11 | 40.31 | 100 |
| | column % | 100 | 100 | 100 | 100 | 100 | 100 |

Annex D. Illness and Injury Incidence

**Table D.1 Percent Ill or Injured in the Past Four Weeks,
by Area, Age Range and Quintile**

| by Area, Age Range and Quintile | | | | | | |
|---------------------------------|------------|-------|-------|-------|-------------|-------|
| | Quintile | | | | | |
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Urban | | | | | | |
| 0-5 | 27.02 | 23.41 | 27.63 | 28.93 | 34.85 | 29.08 |
| 6-14 | 20.7 | 15.88 | 15.68 | 12.17 | 13.37 | 14.65 |
| 15-64 | 19.23 | 22.83 | 22.14 | 18.81 | 17.36 | 19.21 |
| 65 and more | 44.29 | 39.44 | 48.9 | 33.22 | 27.4 | 34.84 |
| Subtotal | 22.43 | 22.03 | 22.45 | 19.75 | 19.06 | 20.49 |
| Rural | | | | | | |
| 0-5 | 35.36 | 31.88 | 35.62 | 34.43 | 35.1 | 34.37 |
| 6-14 | 17.82 | 16.5 | 20.88 | 20.05 | 15.4 | 18.31 |
| 15-64 | 24.31 | 24.48 | 24.92 | 24.6 | 24.01 | 24.51 |
| 65 and more | 37.29 | 38.54 | 46.84 | 42.76 | 48.56 | 42 |
| Subtotal | 25.43 | 24.36 | 26.91 | 26.1 | 25.69 | 25.6 |
| Total | | | | | | |
| 0-5 | 34.79 | 30.78 | 34.12 | 32.53 | 34.94 | 33.34 |
| 6-14 | 18.06 | 16.43 | 19.94 | 17.37 | 14.1 | 17.53 |
| 15-64 | 23.82 | 24.25 | 24.39 | 22.68 | 20.09 | 23.14 |
| 65 and more | 38.08 | 38.69 | 47.16 | 39.28 | 39.4 | 40.21 |
| Subtotal | 25.17 | 24.05 | 26.08 | 23.95 | 21.73 | 24.41 |

**Table D.2 Average Annual Number of Illness or Injury Episodes,
by Area, Age Range and Quintile**

| by Area, Age Range and Quintile | | | | | | |
|---------------------------------|------------|------|------|------|-------------|-------|
| | Quintile | | | | | |
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Urban | | | | | | |
| 0-5 | 3.24 | 2.81 | 3.32 | 3.47 | 4.18 | 3.49 |
| 6-14 | 2.48 | 1.91 | 1.88 | 1.46 | 1.6 | 1.76 |
| 15-64 | 2.31 | 2.74 | 2.66 | 2.26 | 2.08 | 2.31 |
| 65 and more | 5.31 | 4.73 | 5.87 | 3.99 | 3.29 | 4.18 |
| Subtotal | 2.69 | 2.64 | 2.69 | 2.37 | 2.29 | 2.46 |
| Rural | | | | | | |
| 0-5 | 4.24 | 3.83 | 4.27 | 4.13 | 4.21 | 4.12 |
| 6-14 | 2.14 | 1.98 | 2.51 | 2.41 | 1.85 | 2.2 |
| 15-64 | 2.92 | 2.94 | 2.99 | 2.95 | 2.88 | 2.94 |
| 65 and more | 4.47 | 4.62 | 5.62 | 5.13 | 5.83 | 5.04 |
| Subtotal | 3.05 | 2.92 | 3.23 | 3.13 | 3.08 | 3.07 |
| Total | | | | | | |
| 0-5 | 4.17 | 3.69 | 4.09 | 3.9 | 4.19 | 4 |
| 6-14 | 2.17 | 1.97 | 2.39 | 2.08 | 1.69 | 2.1 |
| 15-64 | 2.86 | 2.91 | 2.93 | 2.72 | 2.41 | 2.78 |
| 65 and more | 4.57 | 4.64 | 5.66 | 4.71 | 4.73 | 4.83 |
| Subtotal | 3.02 | 2.89 | 3.13 | 2.87 | 2.61 | 2.93 |

**Table D.3 Percent Ill or Injured in the past Four Weeks,
by Ethnic Group (% of Total)**

| | Ethnic Group | | Total |
|-----------------------------------|--------------|--------|-------|
| | Native | Ladino | |
| Perceived a health problem | 26.42 | 21.79 | 24.36 |
| Did not perceive a health problem | 73.58 | 78.21 | 75.64 |
| Total | 100 | 10000 | 100 |

Annex E. Days Inactive from Illness or Injury

Table E.1 Percentage of Those Who Missed Regular Activities Due to Illness, by Area, Age Range and Quintile

| | Quintile | | | | | Total |
|-------------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| 6-14 | 21.33 | 60.66 | 27.71 | 58.71 | 42.77 | 41.73 |
| 15-64 | 27.32 | 24.17 | 20.58 | 24.7 | 21.79 | 23.06 |
| 65 and more | 21.39 | 45.39 | 0 | 7.31 | 13.2 | 15.84 |
| Subtotal | 24.38 | 35.79 | 20.42 | 27.76 | 25.34 | 26.45 |
| Rural | | | | | | |
| 6-14 | 31.78 | 35.31 | 38.07 | 48.09 | 28.6 | 36.05 |
| 15-64 | 23.74 | 25.3 | 26.52 | 26.57 | 29.14 | 25.77 |
| 65 and more | 15.12 | 21.61 | 23.21 | 23.38 | 14.71 | 19.71 |
| Subtotal | 25.87 | 27.68 | 29.26 | 30.86 | 26.06 | 27.9 |
| Total | | | | | | |
| 6-14 | 30.81 | 38.32 | 36.54 | 50.38 | 37.08 | 37.01 |
| 15-64 | 24.03 | 25.15 | 25.46 | 26.05 | 25.45 | 25.19 |
| 65 and more | 15.84 | 25.49 | 19.77 | 18.7 | 14.36 | 18.97 |
| Subtotal | 25.73 | 28.74 | 27.78 | 30.03 | 25.72 | 27.61 |

Table E.2 Average Number of Days Inactive Due to Illness or Injury in the past Four Weeks, by Area, Age Range and Quintile (only for people over age 6)

| Weeks, by Area, Age Range and Quintile (only for people over age 6) | | | | | | |
|---|------------|------|------|------|-------------|-------|
| | Quintile | | | | | |
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | Total |
| Urban | | | | | | |
| 6-14 | 1.84 | 2.9 | 7.5 | 3.02 | 3.22 | 3.49 |
| 15-64 | 13.36 | 7.42 | 3.41 | 6.41 | 4.33 | 6.04 |
| 65 and more | 2.5 | 10.5 | 0 | 5 | 15 | 9.14 |
| Subtotal | 8.47 | 6.04 | 4.68 | 5.17 | 4.34 | 5.34 |
| Rural | | | | | | |
| 6-14 | 3.59 | 3.3 | 3.16 | 3.01 | 4.19 | 3.34 |
| 15-64 | 6.88 | 5.47 | 5.72 | 6.88 | 6.56 | 6.23 |
| 65 and more | 3.39 | 4.51 | 9.38 | 7.54 | 7.12 | 6.53 |
| Subtotal | 5.27 | 4.64 | 5.12 | 5.63 | 6.31 | 5.24 |
| Total | | | | | | |
| 6-14 | 3.48 | 3.23 | 3.65 | 3.01 | 3.52 | 3.37 |
| 15-64 | 7.47 | 5.71 | 5.38 | 6.76 | 5.61 | 6.2 |
| 65 and more | 3.26 | 6.25 | 9.38 | 7.25 | 8.77 | 6.95 |
| Subtotal | 5.54 | 4.87 | 5.07 | 5.51 | 5.38 | 5.26 |

**Table E.3 Average Annual Number of Days Inactive Due to Illness or Injury,
by Age Range and Quintile (only for people over age 6)**

| | Quintile | | | | | Total |
|--------------|------------|-------|-------|------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| 6-14 | 0.97 | 3.35 | 3.91 | 2.59 | 2.21 | 2.56 |
| 15-64 | 8.43 | 4.92 | 1.87 | 3.57 | 1.97 | 3.21 |
| 65 and more | 2.84 | 22.56 | 0 | 1.46 | 6.51 | 6.05 |
| Subtotal | 5.56 | 5.71 | 2.58 | 3.4 | 2.51 | 3.47 |
| Rural | | | | | | |
| 6-14 | 2.44 | 2.31 | 3.01 | 3.48 | 2.21 | 2.64 |
| 15-64 | 4.77 | 4.06 | 4.53 | 5.4 | 5.51 | 4.72 |
| 65 and more | 2.3 | 4.51 | 12.23 | 9.04 | 6.1 | 6.49 |
| Subtotal | 4.16 | 3.75 | 4.84 | 5.44 | 5.07 | 4.49 |
| Total | | | | | | |
| 6-14 | 2.32 | 2.44 | 3.19 | 3.16 | 2.21 | 2.62 |
| 15-64 | 5.13 | 4.18 | 4.01 | 4.79 | 3.44 | 4.33 |
| 65 and more | 2.36 | 7.4 | 10.49 | 6.39 | 5.95 | 6.36 |
| Subtotal | 4.31 | 4.04 | 4.41 | 4.76 | 3.61 | 4.25 |

**Table E.4 Percentage of People Who Spent Days Inactive Due to Illness or Injury
in the Past Four Weeks (only for people over age 6), by Ethnic Group and Activity**

| | Ethnic Group | | Total |
|---------------|--------------|--------|-------|
| | Native | Ladino | |
| Missed work | 15.14 | 21.07 | 17.52 |
| Missed school | 9.61 | 7.76 | 8.87 |
| Did not miss | 72.57 | 62.59 | 68.57 |
| Fired | 0 | 0.12 | 0.05 |
| Does not know | 2.69 | 8.46 | 5 |
| Total | 100 | 100 | 100 |

Annex F. Health Care-Seeking Behavior

Table F.1 Health Problem Perception and Search for Care, by Ethnic Group

| | Ethnic Group | | Total |
|--|--------------|--------|--------|
| | Native | Ladino | |
| Population who perceived a health problem in the last four weeks | | | |
| Number | 2166.8 | 1432.5 | 3614.5 |
| Percentage | 26.4 | 21.8 | 24.4 |
| Type of episode | | | |
| Accident | 0.3 | 2.1 | 1 |
| Illness | 99.4 | 97.3 | 98.5 |
| Preventive health | 0.3 | 0.6 | 0.5 |
| Action taken | | | |
| Population that sought help due to resolve a health problem | 75.4 | 84.2 | 78.9 |
| Population that did not take an action | 24.2 | 15.2 | 20.6 |
| Number of actions | | | |
| Only one action | 69.5 | 68.3 | 69 |
| Only two actions | 5.9 | 14 | 9.1 |
| Only three actions | 0.1 | 1.8 | 0.8 |
| More than three actions | 0 | 0.2 | 0.1 |
| Population that resolved the health problem with the actions taken | 39 | 35.4 | 37.6 |

Table F.2 Search for Care Including Self-medication in the Past Four Weeks, by Area and Quintile

| | Quintile | | | | | Total |
|---|---------------|-------|-------|-------|----------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| Did not take any action to solve health problem | 22.47 | 22.38 | 14.93 | 16.35 | 11.83 | 16.16 |
| Sought care or self-medication | 77.53 | 77.62 | 85.07 | 83.65 | 88.17 | 83.84 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Did not take any action to solve health problem | 26.03 | 21.94 | 18.67 | 21.11 | 14.93 | 21.79 |
| Sought care or self-medication | 73.97 | 78.06 | 81.33 | 78.89 | 85.07 | 78.21 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Did not take any action to solve health problem | 25.74 | 22 | 18.07 | 19.78 | 13.34 | 20.7 |
| Sought care or self-medication | 74.26 | 78 | 81.93 | 80.22 | 86.66 | 79.3 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

Figure F.1 Percentage Seeking Care in the Last Four Weeks, by Area and Quintile

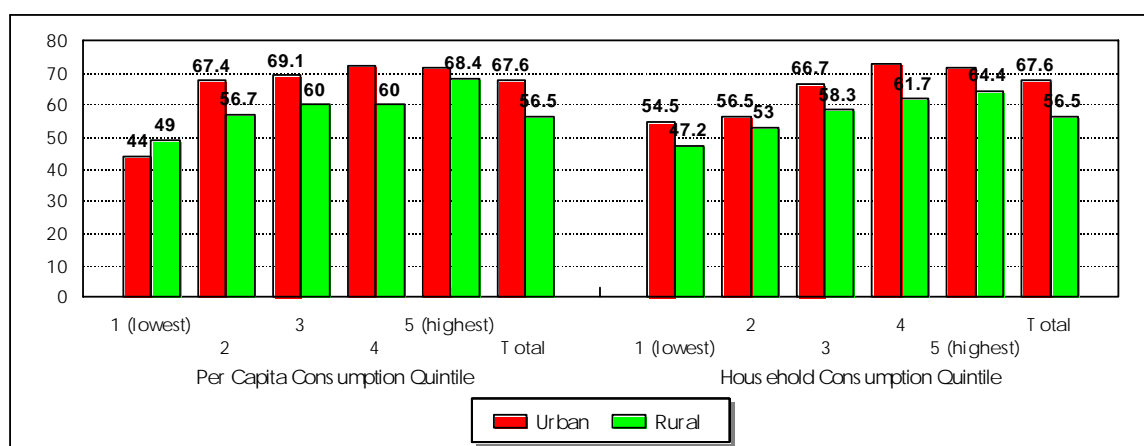


Table F.3 Search for Care in the Past Four Weeks, by Area and Quintile

| Table 10 Search for Care in the Past Four Weeks, by Area and Quintile | | | | | | |
|---|-------------|-------|-------|-------|------------|-------|
| | Quintile | | | | | Total |
| | 1 (highest) | 2 | 3 | 4 | 5 (lowest) | |
| Per capita consumption quintile | | | | | | |
| Urban | | | | | | |
| Did not seek care | 55.99 | 32.63 | 30.9 | 27.95 | 28.51 | 32.36 |
| Sought care | 44.01 | 67.37 | 69.1 | 72.05 | 71.49 | 67.64 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Did not seek care | 50.97 | 43.35 | 39.97 | 40.03 | 31.6 | 43.51 |
| Sought care | 49.03 | 56.65 | 60.03 | 59.97 | 68.4 | 56.49 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Did not seek care | 51.37 | 42.03 | 38.52 | 36.64 | 30.02 | 41.35 |
| Sought care | 48.63 | 57.97 | 61.48 | 63.36 | 69.98 | 58.65 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Household consumption quintile | | | | | | |
| Urban | | | | | | |
| Did not seek care | 45.5 | 43.49 | 33.29 | 27.18 | 28.56 | 32.36 |
| Sought care | 54.5 | 56.51 | 66.71 | 72.82 | 71.44 | 67.64 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Did not seek care | 52.83 | 46.97 | 41.66 | 38.28 | 35.6 | 43.51 |
| Sought care | 47.17 | 53.03 | 58.34 | 61.72 | 64.4 | 56.49 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Did not seek care | 52.02 | 46.6 | 40.56 | 36.31 | 32.45 | 41.35 |
| Sought care | 47.98 | 53.4 | 59.44 | 63.69 | 67.55 | 58.65 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

Table F.4 Search for Care in the Past Four Weeks, by Area and Ethnic Group

| | Ethnic Group | | |
|-------------------|--------------|--------|-------|
| | Native | Ladino | Total |
| Urban | | | |
| Did not seek care | 36.24 | 30.18 | 32.8 |
| Sought care | 63.76 | 69.82 | 67.2 |
| Subtotal | 100 | 100 | 100 |
| Rural | | | |
| Did not seek care | 45.51 | 39.85 | 43.5 |
| Sought care | 54.49 | 60.15 | 56.5 |
| Subtotal | 100 | 100 | 100 |
| Total | | | |
| Did not seek care | 44.22 | 37.16 | 41.42 |
| Sought care | 55.78 | 62.84 | 58.58 |
| Subtotal | 100 | 100 | 100 |

Table F.5 Average Number of Actions Taken by Each Individual Ill or Injured in the Past Four Weeks, by Area and Quintile

| | Quintile | | | | | Total |
|--------------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| 1 | 93.15 | 80.25 | 84.96 | 76.31 | 76.19 | 80.04 |
| 2 | 6.85 | 17.85 | 12.49 | 20.97 | 21.61 | 17.82 |
| 3 | 0 | 1.9 | 2.55 | 2.28 | 2.19 | 2.02 |
| 4 | 0 | 0 | 0 | 0.44 | 0 | 0.11 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| 1 | 91.33 | 90.69 | 88.59 | 87.82 | 82.36 | 89.26 |
| 2 | 8.67 | 8.32 | 10.6 | 10.58 | 16.05 | 9.93 |
| 3 | 0 | 0.99 | 0.27 | 1.6 | 1.59 | 0.68 |
| 4 | 0 | 0 | 0.27 | 0 | 0 | 0.06 |
| 5 | 0 | 0 | 0.27 | 0 | 0 | 0.06 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| 1 | 91.48 | 89.42 | 87.99 | 84.46 | 79.14 | 87.37 |
| 2 | 8.52 | 9.48 | 10.92 | 13.61 | 18.95 | 11.55 |
| 3 | 0 | 1.1 | 0.65 | 1.8 | 1.91 | 0.96 |
| 4 | 0 | 0 | 0.22 | 0.13 | 0 | 0.07 |
| 5 | 0 | 0 | 0.22 | 0 | 0 | 0.05 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

**Table F.6 Average Number of Actions Taken by Each Individual Ill or Injured
in the Past Four Weeks, by Area and Ethnic Group**

| | Ethnic Group | | Total |
|--------------|--------------|--------|-------|
| | Native | Ladino | |
| Urban | | | |
| 1 | 87.24 | 75.37 | 80.17 |
| 2 | 11.67 | 21.81 | 17.71 |
| 3 | 0.81 | 2.82 | 2.01 |
| 4 | 0.28 | 0 | 0.11 |
| Subtotal | 100 | 100 | 100 |
| Rural | | | |
| 1 | 92.88 | 83.4 | 89.29 |
| 2 | 7.12 | 14.48 | 9.91 |
| 3 | 0 | 1.8 | 0.68 |
| 4 | 0 | 0.17 | 0.06 |
| 5 | 0 | 0.17 | 0.06 |
| Subtotal | 100 | 100 | 100 |
| Total | | | |
| 1 | 92.07 | 81.08 | 87.41 |
| 2 | 7.77 | 16.6 | 11.51 |
| 3 | 0.12 | 2.09 | 0.95 |
| 4 | 0.04 | 0.12 | 0.07 |
| 5 | 0 | 0.12 | 0.05 |
| Subtotal | 100 | 100 | 100 |

Annex G. Choice of Provider

Table G.1 Distribution of Choice of Provider of Those Whose First Action was to Seek Care in a Health Facility, by Area and Quintile

| | Quintile | | | | | Total |
|--------------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| Public | 75.48 | 38.52 | 29.05 | 34.29 | 10.82 | 24.41 |
| IGSS | 0 | 0 | 7.72 | 0 | 7.91 | 4.77 |
| Private | 24.52 | 61.48 | 63.23 | 58.9 | 77.36 | 67.19 |
| Others | 0 | 0 | 0 | 6.81 | 3.91 | 3.62 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Public | 47.61 | 52.92 | 30.08 | 33.35 | 21.1 | 36.11 |
| IGSS | 2.23 | 1.79 | 0.91 | 3.42 | 2.92 | 2.2 |
| Private | 40.33 | 37.47 | 66.98 | 58.54 | 74.51 | 56.73 |
| Others | 9.82 | 7.83 | 2.02 | 4.69 | 1.46 | 4.95 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Public | 50.11 | 48.92 | 29.87 | 33.71 | 14.86 | 32.04 |
| IGSS | 2.03 | 1.29 | 2.31 | 2.12 | 5.95 | 3.1 |
| Private | 38.91 | 44.14 | 66.21 | 58.68 | 76.24 | 60.38 |
| Others | 8.94 | 5.65 | 1.6 | 5.49 | 2.95 | 4.49 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

Table G.2 Distribution of Choice of Provider of Those Whose First Action was to Seek Care in a Health Facility, by Area and Age Range

| | Age Range | | | | Total |
|--------------|-----------|-------|-------|-------------|-------|
| | 0-5 | 6-14 | 15-64 | 65 and more | |
| Urban | | | | | |
| Public | 22.89 | 27.64 | 24.58 | 22.21 | 24.29 |
| IGSS | 1.72 | 0 | 8.61 | 0 | 4.75 |
| Private | 75.39 | 59.13 | 65.05 | 66.18 | 67.36 |
| Others | 0 | 13.22 | 1.77 | 11.61 | 3.61 |
| Subtotal | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | |
| Public | 37.73 | 55.48 | 31.14 | 32.77 | 36.11 |
| IGSS | 0.86 | 0 | 3.75 | 1.69 | 2.2 |
| Private | 54.86 | 42.28 | 60.03 | 61.84 | 56.73 |
| Others | 6.54 | 2.24 | 5.08 | 3.7 | 4.95 |
| Subtotal | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | |
| Public | 32.42 | 45.08 | 28.74 | 30.22 | 31.98 |
| IGSS | 1.17 | 0 | 5.53 | 1.28 | 3.09 |
| Private | 62.21 | 48.58 | 61.87 | 62.89 | 60.45 |
| Others | 4.2 | 6.34 | 3.87 | 5.62 | 4.48 |
| Subtotal | 100 | 100 | 100 | 100 | 100 |

Table G.3 Percent of People Who Were Seen by a Doctor, by Area and Quintile

| | Quintile | | | | | Total |
|-------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | 33.13 | 73.84 | 92.57 | 98.2 | 95.55 | 90.99 |
| Rural | 56.06 | 64.67 | 77.54 | 82.7 | 85.51 | 73.01 |
| Total | 54.08 | 67.11 | 80.5 | 88.81 | 91.66 | 79.21 |

Note: The percentage is calculated over those whose first action was to seek care in: a) a health facility; b) professional care at home.

Annex H. Utilization of Hospital Services

Table H.1 Hospital Care Utilization in the past Four Weeks, by Area and Quintile

| | Quintile | | | | | Total |
|-------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | 21.72 | 73.75 | 87.46 | 81.42 | 91.03 | 83.58 |
| Rural | 45.65 | 48.55 | 72.72 | 77.95 | 85.28 | 66.43 |
| Total | 43.49 | 55.16 | 75.77 | 79.27 | 88.75 | 72.31 |

Annex I. Prenatal Care and Immunizations

Table I.1 Average Number of Immunizations Doses, by Age Range and Quintile

| | Quintile | | | | | Total |
|--------------|------------|------|------|------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| 0 | 4.2 | 3.16 | 2.75 | 3.21 | 4.96 | 3.62 |
| 1 | 6.29 | 6.93 | 6.22 | 7.41 | 7.23 | 6.99 |
| 2 | 6.23 | 6.99 | 6.72 | 7.96 | 7.68 | 7.32 |
| Subtotal | 5.07 | 5.28 | 4.82 | 6.32 | 6.66 | 5.79 |
| Rural | | | | | | |
| 0 | 2.69 | 2.74 | 3.45 | 3.48 | 2.22 | 2.94 |
| 1 | 5.94 | 6.09 | 6.08 | 5.89 | 7.35 | 6.03 |
| 2 | 6.59 | 6.62 | 6.7 | 7.23 | 6.49 | 6.7 |
| Subtotal | 5.03 | 5.05 | 5.43 | 5.56 | 5.18 | 5.2 |
| Total | | | | | | |
| 0 | 2.81 | 2.81 | 3.29 | 3.4 | 3.89 | 3.08 |
| 1 | 5.96 | 6.19 | 6.1 | 6.37 | 7.26 | 6.21 |
| 2 | 6.57 | 6.67 | 6.7 | 7.47 | 7.19 | 6.81 |
| Subtotal | 5.04 | 5.08 | 5.33 | 5.8 | 6.13 | 5.31 |

Table I.2 Percentage of Women Between Ages 15-49 Who Received Prenatal Care, by Area and Quintile

| | Quintile | | | | | Total |
|-------------------------------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| Received prenatal care | 90.74 | 92.53 | 89.4 | 77.4 | 95.28 | 88.72 |
| Did not receive prenatal care | 9.26 | 7.47 | 10.6 | 22.6 | 4.72 | 11.28 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Received prenatal care | 84.47 | 81.19 | 90.29 | 85.27 | 95.29 | 85.35 |
| Did not receive prenatal care | 15.53 | 18.81 | 9.71 | 14.73 | 4.71 | 14.65 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Received prenatal care | 84.88 | 82.7 | 90.14 | 82.83 | 95.28 | 85.98 |
| Did not receive prenatal care | 15.12 | 17.3 | 9.86 | 17.17 | 4.72 | 14.02 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

Annex J. Deliveries

Table J.1 Deliveries, by Choice of Provider and Quintile

| | Quintile | | | | | Total |
|------------------------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| Public Hospital | 9.47 | 22.88 | 30.84 | 51.55 | 54.59 | 39.1 |
| Health Center | 3.11 | 0 | 0 | 0 | 0 | 0.34 |
| Health Post | 0 | 0 | 0 | 0 | 0 | 0 |
| IGSS | 0 | 0 | 0 | 0 | 4.73 | 1.34 |
| Private Hospital | 0 | 0 | 7.06 | 2.56 | 9.58 | 4.65 |
| Clinic | 2.9 | 3.62 | 5.46 | 1.24 | 8.35 | 4.61 |
| Midwife's House | 0 | 7.94 | 0 | 2.72 | 4.86 | 3.44 |
| At home with a midwife | 78.52 | 63.75 | 46.17 | 36.5 | 14.4 | 41.29 |
| At home alone | 3.11 | 0 | 0 | 2.72 | 0 | 1.02 |
| Others | 2.9 | 1.81 | 10.47 | 2.72 | 3.48 | 4.22 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Public Hospital | 4.77 | 11.79 | 18.03 | 17.93 | 50.43 | 12.75 |
| Health Center | 0.42 | 0 | 0.73 | 1.22 | 0 | 0.47 |
| Health Post | 0.22 | 0 | 0 | 0 | 0 | 0.08 |
| IGSS | 0.2 | 0 | 2.04 | 0 | 4.29 | 0.66 |
| Private Hospital | 0 | 0.57 | 0.33 | 1.22 | 4.43 | 0.53 |
| Clinic | 0.2 | 0 | 1.02 | 0.56 | 0 | 0.37 |
| Midwife's House | 0.87 | 1.79 | 1.79 | 1.22 | 0 | 1.33 |
| At home with a midwife | 77.35 | 74.96 | 69.9 | 73.1 | 40.85 | 73.31 |
| At home alone | 7.16 | 6.03 | 2.74 | 1.22 | 0 | 4.88 |
| Others | 8.81 | 4.86 | 3.43 | 3.52 | 0 | 5.62 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Public Hospital | 5.08 | 13.26 | 20.11 | 28.36 | 53.17 | 17.7 |
| Health Center | 0.6 | 0 | 0.61 | 0.84 | 0 | 0.44 |
| Health Post | 0.2 | 0 | 0 | 0 | 0 | 0.06 |
| IGSS | 0.19 | 0 | 1.71 | 0 | 4.58 | 0.79 |
| Private Hospital | 0 | 0.5 | 1.43 | 1.64 | 7.83 | 1.3 |
| Clinic | 0.38 | 0.48 | 1.74 | 0.77 | 5.51 | 1.17 |
| Midwife's House | 0.81 | 2.61 | 1.5 | 1.69 | 3.21 | 1.72 |
| At home with a midwife | 77.43 | 73.47 | 66.04 | 61.74 | 23.41 | 67.3 |
| At home alone | 6.89 | 5.23 | 2.3 | 1.69 | 0 | 4.16 |
| Others | 8.42 | 4.45 | 4.57 | 3.27 | 2.29 | 5.35 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

Annex K. Consumption of Medicines

Table K.1 Percent Who Bought Medicines, by Area and Quintile

| | Quintile | | | | | Total |
|-------------------------------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | | | | | | |
| Pharmacy with prescription | 43.58 | 60.03 | 59.2 | 52.94 | 40.41 | 49.85 |
| Pharmacy without prescription | 0 | 0 | 1.97 | 2.59 | 1.38 | 1.48 |
| Did not buy medicines | 56.42 | 39.97 | 38.83 | 44.47 | 58.21 | 48.68 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Rural | | | | | | |
| Pharmacy with prescription | 52.61 | 58.69 | 55.59 | 56.45 | 47.52 | 54.98 |
| Pharmacy without prescription | 0.11 | 1.26 | 0.6 | 0.4 | 0.71 | 0.6 |
| Did not buy medicines | 47.28 | 40.05 | 43.81 | 43.15 | 51.77 | 44.43 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |
| Total | | | | | | |
| Pharmacy with prescription | 51.86 | 58.86 | 56.19 | 55.43 | 43.81 | 53.93 |
| Pharmacy without prescription | 0.1 | 1.11 | 0.83 | 1.04 | 1.06 | 0.78 |
| Did not buy medicines | 48.04 | 40.04 | 42.98 | 43.53 | 55.13 | 45.3 |
| Subtotal | 100 | 100 | 100 | 100 | 100 | 100 |

Table K.2 Percent Who Sought Care and Who Received Medicine at the Facility Where Diagnosed, by Area and Quintile

| | Quintile | | | | | Total |
|-------|------------|-------|-------|-------|-------------|-------|
| | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | 100 | 58.25 | 55.52 | 44.68 | 44.99 | 48.65 |
| Rural | 75.52 | 77.3 | 78.45 | 72.85 | 71.98 | 75.55 |
| Total | 76.62 | 71.07 | 73.7 | 60.88 | 54.36 | 65.4 |

Annex L. Health Spending

Table L.1 Average Expenditure on Medicines in the past Four Weeks, by Area, Type of Provider and Quintile

| | | | Quintile | | | | |
|-------------------------------|-----------|--------|------------|--------|--------|---------------|-------|
| | | | 1 (lowest) | 2 | 3 | 4 5 (highest) | Total |
| Urban | | | | | | | |
| Pharmacy without prescription | Quetzales | 261.41 | 10.71 | 10.66 | 179.83 | 17.45 | 80.17 |
| | US \$ | 45.07 | 1.85 | 1.84 | 31 | 3.01 | 13.82 |
| Pharmacy with prescription | Quetzales | N.A. | N.A. | 57.83 | 48.67 | 170.64 | 89.21 |
| | US \$ | N.A. | N.A. | 9.97 | 8.39 | 29.42 | 15.38 |
| From the provider | Quetzales | 0 | 22.11 | 19.45 | 31.43 | 54.53 | 40.46 |
| | US \$ | 0 | 3.81 | 3.35 | 5.42 | 9.4 | 6.98 |
| Subtotal | Quetzales | 4.82 | 12.97 | 13.21 | 141.5 | 35.9 | 53.16 |
| | US \$ | 0.83 | 2.24 | 2.28 | 24.4 | 6.19 | 9.17 |
| Rural | | | | | | | |
| Pharmacy without prescription | Quetzales | 10.27 | 55.01 | 13.7 | 15.47 | 105.11 | 29.89 |
| | US \$ | 1.77 | 9.49 | 2.36 | 2.67 | 18.12 | 5.15 |
| Pharmacy with prescription | Quetzales | 15 | 45 | 164.23 | 12 | 110 | 74.29 |
| | US \$ | 2.59 | 7.76 | 28.32 | 2.07 | 18.97 | 12.81 |
| From the provider | Quetzales | 22.89 | 21.95 | 64.35 | 47.78 | 53.58 | 45.33 |
| | US \$ | 3.95 | 3.79 | 11.09 | 8.24 | 9.24 | 7.82 |
| Subtotal | Quetzales | 11.4 | 51.75 | 22.72 | 20.62 | 87.36 | 31.81 |
| | US \$ | 1.97 | 8.92 | 3.92 | 3.56 | 15.06 | 5.49 |
| Total | | | | | | | |
| Pharmacy without prescription | Quetzales | 27.94 | 49.47 | 13.16 | 61.27 | 63.39 | 39.38 |
| | US \$ | 4.82 | 8.53 | 2.27 | 10.56 | 10.93 | 6.79 |
| Pharmacy with prescription | Quetzales | 15 | 45 | 122.23 | 38.66 | 151.24 | 80.11 |
| | US \$ | 2.59 | 7.76 | 21.07 | 6.67 | 26.08 | 13.81 |
| From the provider | Quetzales | 22.33 | 22.01 | 55.4 | 41.74 | 54.22 | 43.52 |
| | US \$ | 3.85 | 3.79 | 9.55 | 7.2 | 9.35 | 7.5 |
| Subtotal | Quetzales | 10.94 | 46.3 | 21.01 | 56.28 | 60.08 | 36.44 |
| | US \$ | 1.89 | 7.98 | 3.62 | 9.7 | 10.36 | 6.28 |

Table L.2 Average Annual Expenditure on Health Care for Those Who Perceived a Health Problem, by Area and Quintile

| | | | Quintile | | | | | Total |
|-------|-----------|--|------------|--------|--------|--------|-------------|--------|
| | | | 1 (lowest) | 2 | 3 | 4 | 5 (highest) | |
| Urban | Quetzales | | 79.31 | 320.12 | 614.13 | 450.23 | 1002.4 | 599.58 |
| | US \$ | | 13.67 | 55.19 | 105.88 | 77.63 | 172.83 | 103.38 |
| Rural | Quetzales | | 111.2 | 141.03 | 318.9 | 311.72 | 1117.94 | 271.12 |
| | US \$ | | 19.17 | 24.32 | 54.98 | 53.74 | 192.75 | 46.74 |
| Total | Quetzales | | 108.63 | 162.91 | 366.35 | 350.5 | 1058.34 | 335.33 |
| | US \$ | | 18.73 | 28.09 | 63.16 | 60.43 | 182.47 | 57.82 |

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